



## FEEDING YOUNG CHILDREN 2

How do we know if they are eating enough?

### THE IDEA

Children must have enough of the right kind of food for healthy growth and to fight infection. Many children are not getting enough good food. If these children are helped early on in their lives they will be able to develop well. There are three simple ways of finding out if an infant or young child is not getting enough food:

- By knowing how to recognise the signs of having too little food.
- By weighing young children regularly at the clinic and recording their weight on a chart.
- By measuring the upper arm of children under five years of age.



Children can learn to understand why some children are undernourished, and how young children can be helped.

In some societies, particularly in cities, children are eating far too many salty, sweet, fatty and processed 'junk foods' and are becoming obese – so fat that they are unhealthy and inactive. This increases their chances of ill health from heart disease and diabetes in their adult life.

Children can start the habit of healthy eating that will last throughout their lives.

### Nutrition lessons in municipal schools in low-income areas in Mumbai, India

As part of their healthy eating projects, the schools celebrate Salad Day and Green Vegetable Day. Children bring in and share healthy food. Children bring gram (chick pea), pieces of fruits and cucumber to birthday celebrations. A teacher observed: 'Parents used not to bother about what children ate. Now children, even if they get money, are able to choose the right food from the street vendors. They are more likely to choose fruits. Children are now insisting that parents cook food for them and we teachers reinforce these messages, telling the parents to keep leftovers from the night before, far better than eating from street food vendors.'

### Understanding

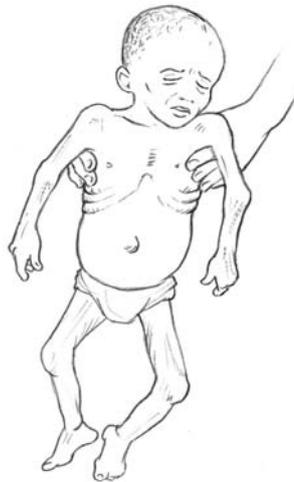
When children do not have enough of the correct food they are undernourished. When a child is undernourished it is always a serious matter. He is less strong, less active, less interested in things and therefore less able to play and learn. He is less able to fight disease, he becomes ill

more often, and is in danger of becoming steadily weaker and even of dying.

If babies and young children do not eat enough good mixtures of food and nobody knows how to help them, they will become very ill. In extreme cases these children may look very thin with loose, wrinkled skin and be very irritable and unhappy or they may look swollen with cracked and peeling

skin and sparse hair. They will not be interested in things and have a poor appetite.

This is why it is very important to recognise babies and young children who are not eating enough from the earliest stage. It is important to learn how to help them. If these children are well fed they will grow and develop healthily. If they are undernourished when children, they will remain shorter in height for their age (stunted) when they are adults.



babies and young children who are not eating enough, though these signs can also be caused by other problems.

- We can watch them for changes in mood. They may stop smiling, making happy noises or playing.
- We can watch them for changes in activity. They may move about less, roll over and crawl less, and want to sleep more. They may not learn to sit up.
- We can watch them for changes in appearance. They may get thinner and look unhappy.
- We can watch if they eat less than usual and do not seem hungry.
- Mothers will often be able to describe these changes in their children.

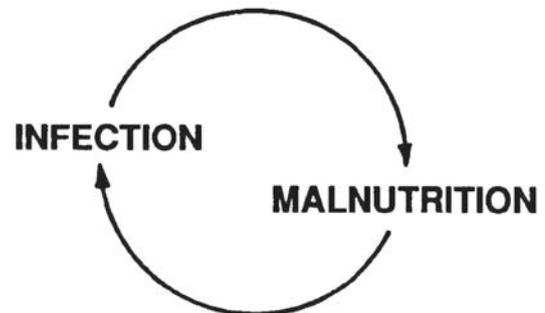
## What causes a child to be undernourished?

Children who have had an illness such as diarrhoea or measles often lose weight because they became weak and less able to eat (see Activity Sheet 6.2 **Caring for Children Who Are Sick** for more ideas on how to help). Children may not eat enough good mixtures of food because their families are too poor. Many mothers are very busy and need help to find time to feed their children frequently.

There are other more complicated causes of why children are undernourished, such as wars, family conflict, disasters and inequalities within societies. For example, girls may be given smaller amounts of food or less nutritious food than boys. Children with disabilities may not eat enough because their difficulties mean that it takes them a long time to eat or that they need help to eat. Or it may be that they are not valued as much as other children in the family and are given less food. The causes of under-nutrition are often complex.

## How to recognise children who are not eating enough

We can sometimes recognise signs in



The vicious circle of malnutrition and infection

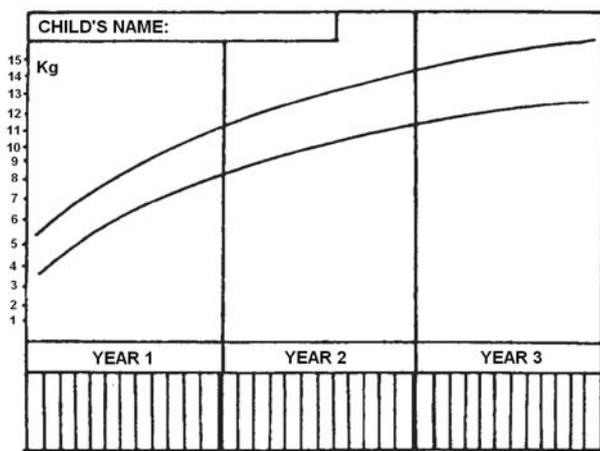
After a child has been ill, he needs extra food to help him catch up his lost weight. He needs to eat extra food for two to three weeks. A sick child should be encouraged to eat often, every two to three hours or more. He needs to eat more frequently – little and often – until his weight returns to normal. If he does not eat well he will become weak and fall sick again. It is vital to break this circle.

## Measuring growth in babies and young children

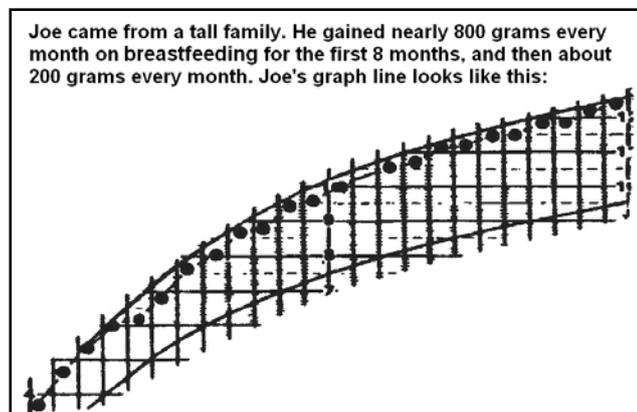
A good way to check if babies and young children up to the age of 18 months are eating well and growing properly is to weigh them regularly. Simple weighing scales are available in most countries. Health workers and parents can record the child's weight and mark it on a 'Road to Health' chart. The chart looks like this:

## ACTIVITY SHEET 2.2

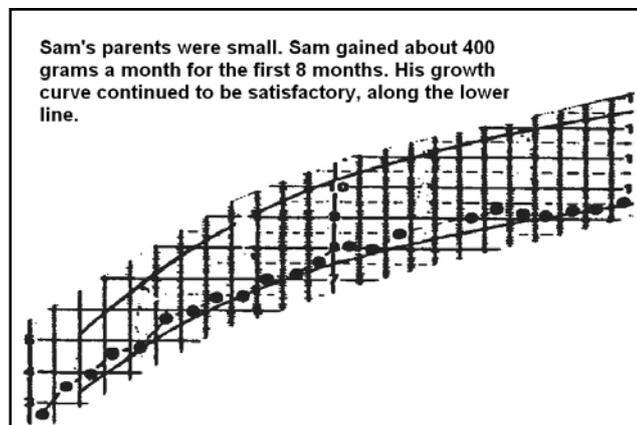
### CHILD-TO-CHILD TRUST



If the child's weight is marked regularly and he is eating well and growing well the health worker and parents will be able to see a steady increase in his weight.



Not all children gain weight at the same rate and not all children weigh the same at birth. If the child's parents are small then the child may also be small and weigh less than other children. He is not in danger if he continues to gain weight steadily, even though the weights are near or just below the bottom line of the 'road'.



However, if the graph shows that the line does not rise, month by month, as the child gets older – or if the line drops due to an infection, and does not come up again quickly – then these are signs of danger.

**What are the reasons?** The child may have been ill and is not recovering quickly. He may be caught in the 'circle of malnutrition'. For some young children, breastfeeding may have stopped. A lack of breast milk can often cause growth failure in the first six months of life. There may be a shortage of food or maybe the carers need more knowledge about how often to feed the child and the correct mixture of foods (see Activity Sheet 2.1 **Feeding Young Children 1**).

Here is the growth chart of one child (page 49). This shows how illnesses have affected the young girl's growth and weight.

As we have said, undernutrition is a complex issue. Here are some long-term and some short-term ways of helping children who are undernourished.

#### Child-headed households

The number of children who are the heads of households is increasing dramatically due to the sickness and death of their parents from HIV and AIDS-related diseases. All the children in these households are especially vulnerable and in need of support.

#### Cause: Illness

##### Short-term help:

Give extra food through five meals or snacks a day to allow the child to 'catch up'. Give love and care from adults and other children.

##### Long-term help:

Give good food, including plenty of energy and protective foods.

Ensure the child is fully immunised.

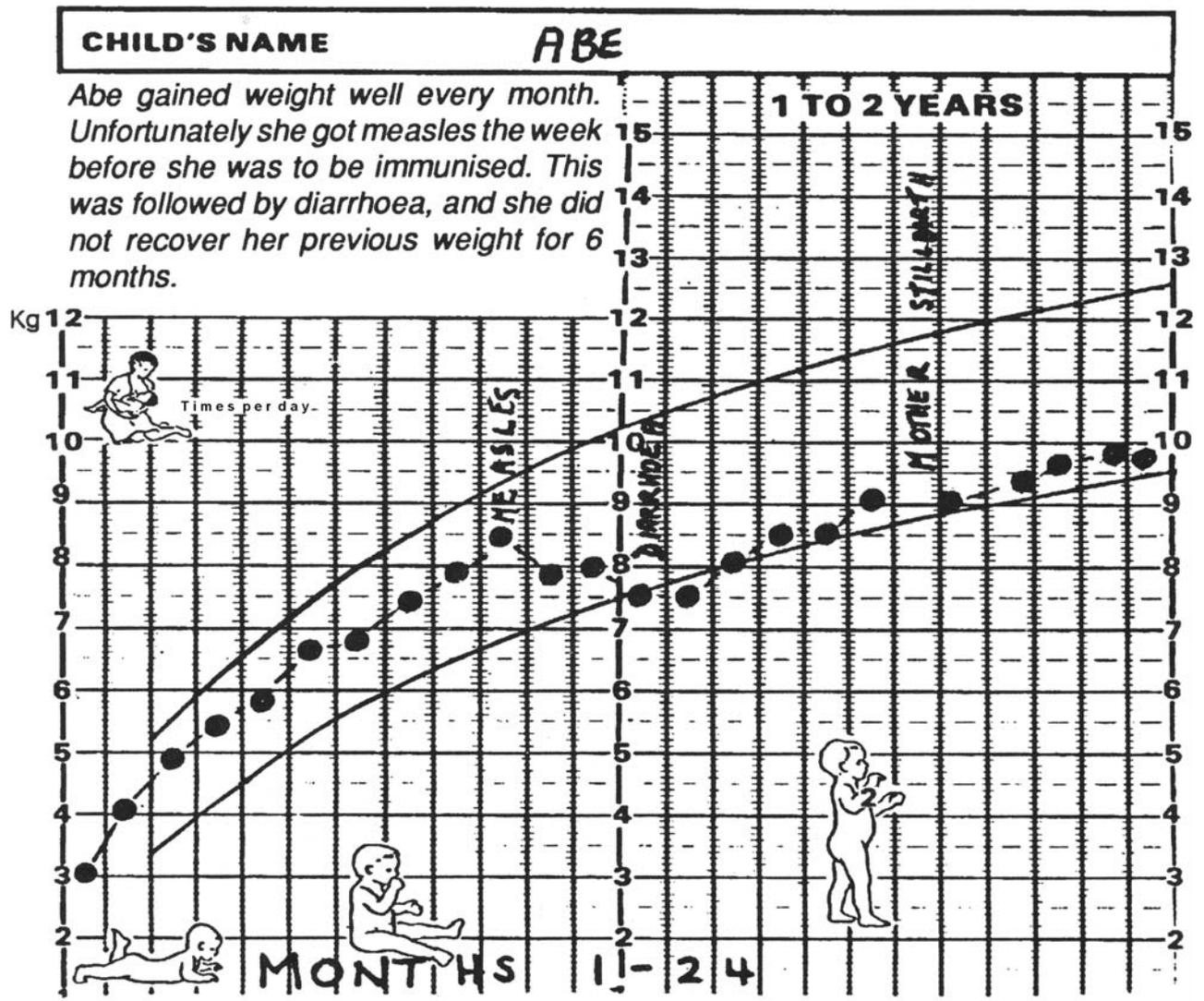
Ensure there are better standards of hygiene to prevent disease.

#### Cause: Not enough food

##### Short-term help:

Encourage better sharing between families and communities.

Try to ensure that there are high energy and protective foods.



Make more frequent meals using available food. Encourage relatives and friends to provide snacks and meals if both parents are away from home or are sick or the children are orphaned.

**Long-term help:**

Better social conditions in the community.  
More help and concern nationally and worldwide to reduce poverty and give those without food the means to help themselves.

**Cause: Poor knowledge of good feeding habits**

**Short-term help:**

Spreading messages to the community through many means, including messages spread by children.

Emphasise the importance of feeding children when they are ill or experiencing difficulty feeding as a result of a disability.

Some children with cerebral palsy, for example, may have difficulty chewing and swallowing.

**Long-term help:**

Education on nutrition in schools.

**Children and schools take action**

In Yemen and Uganda children monitored food sellers around their schools to ensure the food was good and safe to eat. In India, children set up their own stalls to sell nutritious snacks. In Lesotho the authorities ensured children in school were given a nutritious meal.

Education for adults – for fathers as well as mothers.

Concentrate on changing customs, for example, times and priorities for feeding children, as well as knowledge about nutrition and recording growth.

**Changing customs for healthier eating**

In Vietnam, health workers noticed that the children of some families with very low incomes were better nourished than their more well off neighbours. They discovered that the poorer parents were feeding their children on food, such as shrimp caught in the rice fields, which was considered inedible by their neighbours. This type of behaviour has become known as 'positive deviancy'. It means individuals or families take action that is considered unacceptable by others in the community, but this action has positive benefits for the 'deviant' families.

**A good start**

All children are less likely to be undernourished if they are protected against disease in the first year of their life. Both frequent breast-feeding and immunisation help to give such protection.

In Yemen school children made beautifully decorated immunisation cards with the schedule of immunisations clearly marked. They gave the cards to mothers of newborn babies in their neighbourhood and explained the importance of the baby receiving all of the immunisations.

**Weighing and measuring children when they are older**

After children are over the age of eighteen months, before they go to primary school, and during the time they are at school, they should continue to be weighed and measured. (This is a good way to link health with mathematics.) Children who do not gain height and weight regularly may need help.

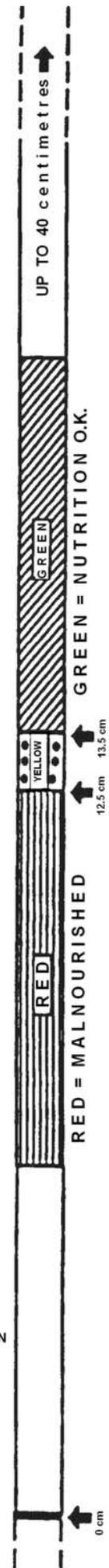
**Measuring arm circumference**

One of the ways of recognising whether children between one and five years old are undernourished is by measuring around their upper arms. The circumference – the distance around the arm – does not change

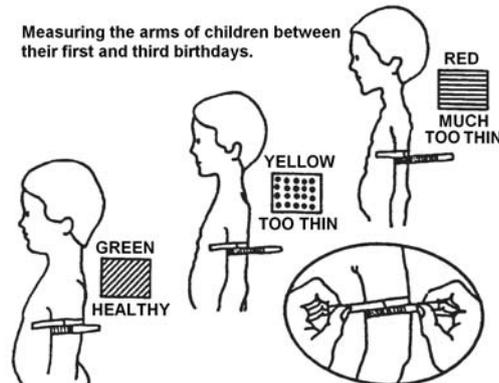
very much during the first five years of life. Children can check this by feeling the arm of a five-year-old child and then that of a one-year-old child. In the one-year-old there is more fat than muscle. In the five-year-old there is more muscle than fat. If a child is not growing properly, or losing weight, then the muscles do not grow and the arm circumference is less than normal. We need to measure the circumference of the arm halfway between the bony points of the shoulder and the elbow, using an 'arm circumference strip'. It is sometimes called the 'Shakir Strip' after the name of the doctor who first used it.

**Making a Shakir Strip**

The strip can be made from strong paper, thick plastic, or string, a strip from around a plastic bottle, or fibre from plants. It is important that the material does not stretch and this can be checked by pulling it beside a ruler. The strip should be about **1 cm wide** and about **40 cm long**. Whatever material is being used, put a mark near one end (0), then at 5 cm, 12.5 cm, 13.5 cm and finally 20 cm from the 0 mark. It is very important to get the **12.5 cm** and the **13.5 cm** in **exactly the right places**. Then colour and mark the strip as shown.



Measuring the arms of children between their first and third birthdays.



## Measuring using the strip

In healthy children, the measurement is more than 13.5 cm. When the strip is put around their arm, the zero (0) mark reaches the green part of the strip. If the zero (0) mark reaches the yellow part, the child is too thin. If it reaches the red part, the child is much too thin and may be undernourished.

## Activities to deepen children's understanding

Children can discuss:

- Do we know children who are too thin and undernourished?
- What are the reasons?
- What can we do to help children who are undernourished?
- Why is it important to measure the growth in babies and young children?

Children can **learn** and practise:

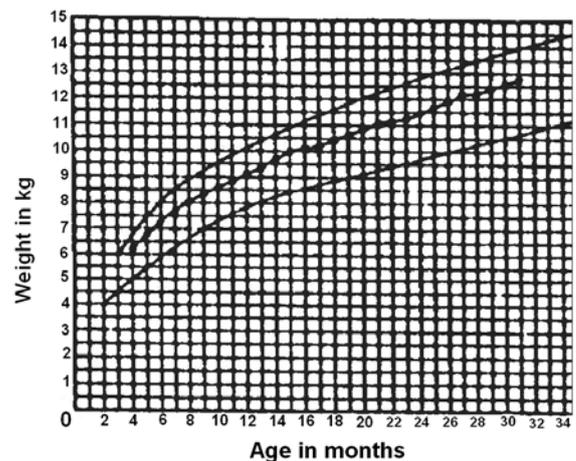
- How to fill in a 'Road to Health' chart (if one is available). A bucket partly full of water or sand can be used for a weight. By putting water or sand into the bucket, or taking it out, it is possible to show how weights on the chart can vary.
- How to interpret weight charts.
- Health workers and teachers arrange for parents to bring babies into school so that children can watch them being weighed and help to record their weight on a chart.

Older children can learn to interpret the meaning of different dots and lines on the growth chart.

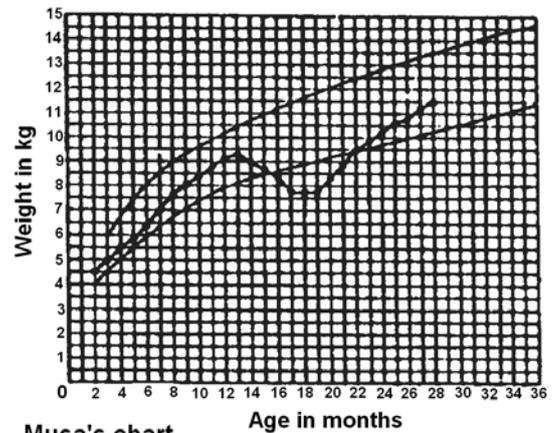
Here are the charts for three children and **some examples of questions** that can be asked:

- Which child has grown steadily?
- Which child lost weight after 13 months?
- Which child lost weight after four months?
- When did Miriam start to get better?
- What weight was Raj at two years?
- When did Musa start to gain weight fast?
- How long did Miriam's illness last?
- What do you think Raj's weight might be by the time he is three years old if he continues to grow well?

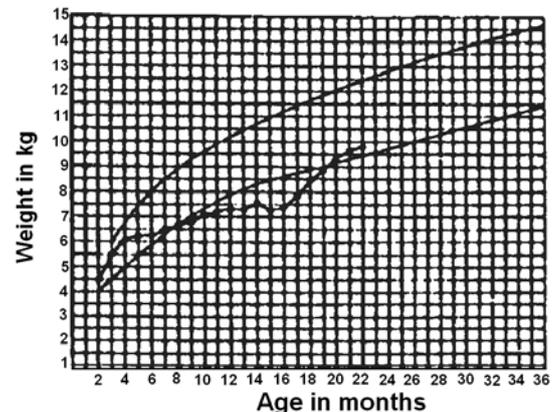
Raj's chart



Miriam's chart



Musa's chart



Children can use **story telling, drama and role-playing** to understand the problems created by undernutrition. For example, they can make up a play about 'Sita who was always sick' to illustrate the circle of undernutrition.

Or they can tell Sita's story and then play the question game: 'But why ...?' One person can tell a story of how Sita is always sick. After the story the children can play the game, 'But why ...?' Everyone tries to point out different reasons why Sita got sick. Each time an answer is given, the storyteller asks the question, 'But why?'

## ACTIVITY SHEET 2.2

### CHILD-TO-CHILD TRUST

In this way children keep looking for other causes. This helps children to see that there are many different reasons why children like Sita are undernourished and sick. Poverty may be one cause but not the only one.

Children can make a drama or a puppet show about two families – one with children who are growing well and one with children who are not and ask:

- *Why is this so?*
- *What can families do?*
- *Can they help each other?*

### Finding out more

Children can visit a clinic and learn how people in the area are helped to avoid undernourishment. The health worker can demonstrate how babies are weighed and checked at the clinic. The children can get a sample of the clinic weight chart and examine it.

Children can conduct a survey on how mothers in their community know when babies are getting thinner. For example, some mothers put strings around the babies' arms, legs or hips. These strings need changing as the baby grows. They can find out what other methods mothers use.

It is likely that in any group of children there are some who do not have a balanced diet. There may be many reasons for this. Nutrition is a complex and sensitive issue. If children play a role in improving their own and others' nutrition they need to learn how to listen and talk to people and understand their problems. Children can analyse problems using a **needs analysis chart** such as the one illustrated on the next page. This activity helps children learn how to listen and how to think deeply about a problem.

These are suggested steps to using the needs analysis chart.

- 1 In groups of five to ten, children make or are given a chart such as the one on the next page.
- 2 They identify three to five problems that

can lead to poor nutrition of children in their community. They write these in the 'problem/topic' column of the chart.

- 3 They discuss how serious each problem is and how common. They decide on a points system. For example, the chart below uses 5/5 = most common/most serious and 1/1 = least common/least serious.
- 4 Children discuss how much they can do about each of these problems. If children can do a lot about the problem they will give it a high score of 4 or 5.
- 5 Then they add up the points awarded against each problem and discuss the outcome.
- 6 Children can compare the results of their charts with other groups.
- 7 Children can then make one group chart from all their charts, identifying problems that are most common and serious and provide many opportunities for children to make a difference.
- 8 The teacher or health worker can discuss why talking about nutrition in the family is important AND difficult. However, they can give examples, such as the ones in this Activity Sheet, that show children have helped to improve their own nutrition and the nutrition of their friends and family.

The teacher or health worker can ask:

- *What have you chosen as the most important nutrition problems?*
- *Are these easy problems for children to do something about? Why/Why not?*
- *Is it easy to change nutrition habits in the family? Why/Why not?*

**Note:** There may be problems that are common and serious but they are problems that *cannot* be solved by children. Child-to-Child activities should not burden children with adult responsibilities.

Children can visit the market and identify foods for sale. They can agree what they will observe during the visit. For example:

- Different types of foods that are available, e.g. staple foods and foods such as meat, fish, beans, nuts, vegetables, fruits, oil and fats.
- The cost for a given measure/amount of each food, e.g. a 5 kg bag of maize flour, a bunch of green leafy vegetable, a 300 ml bottle of cooking oil.
- Whether there is a large variety of fruits and vegetables.
- Whether the food looks fresh, especially fruits and vegetables.

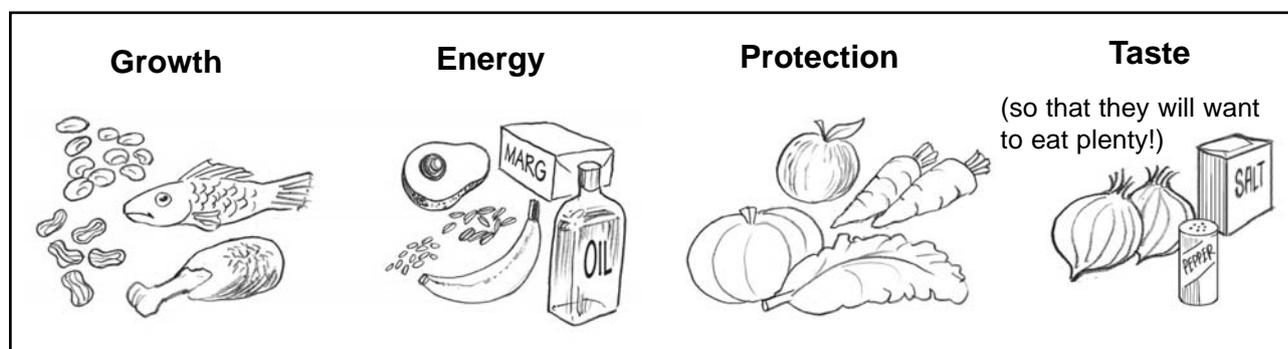
After the visit, the children can discuss:

- *What different foods did they find, e.g. rice, maize, flour, etc.?*

- *Which foods were good sources of protein?*
- *Which foods were good sources of vitamin A and iron?*
- *Which foods were good sources of iodine?*
- *Which foods were the best value for money?*
- *Is it better to sell your eggs and buy dhal, or eat your eggs.*

## Planning and doing

Depending on what they found out children can plan activities to help to ensure children are getting enough of the right kind of food for healthy growth and to fight infection. (See Activity Sheet 2.1 **Feeding Young Children 1** for more ideas.)



Here is an example of the results of a needs analysis chart:

Problems leading to poor nutrition of children				
Problem/Topic	How common?	How serious?	How much can children do?	Importance to the CTC programme
Children do not have breakfast before they go to school	3	5	3 - Children ask the Women's Group for help. With women's and teachers' support, snacks are provided at the start of the school day.	11
Families grow cash crops not for family eating	4	5	3 - With teachers' support, children start a school vegetable garden and share produce with all the children.	12
Girls are not given as much food as boys	3	5	4 - Children make posters and put on puppet shows to raise awareness, with teachers' and health workers' support, about the importance of healthy eating for ALL children.	12
Children with disabilities are often undernourished	4	5	3 - Children 'twin' with a disabled child to help to find out why.	12

## ACTIVITY SHEET 2.2

### CHILD-TO-CHILD TRUST

Here are some examples:

- Children can give cooking demonstrations to show how special foods can be prepared to help children who are undernourished or have been ill and need extra food. For example, porridge enriched with mashed vegetables and a spoonful of oil or fat.
- They can give demonstrations of how to weigh babies and use the growth chart.
- Children can put on plays and puppet shows about weighing, measuring and feeding babies and small children.
- They can hold a poster competition.
- Children can measure the weight and height of all the children in the class and ask questions such as: Are the taller ones always heavier than the shorter ones? What is the average height/weight of the class?
- Children can make and practise measuring arm circumference with a Shakir Strip. They can make the strip as explained earlier in this Activity Sheet. They can check each other's strips to see if they have been measured and marked correctly. They can then colour the strip. At first they can practise measuring around maize cobs, bottles, wooden poles and small trees.
- Children can measure and record the height and weight of young children in the school. Each child in an older class can 'adopt' a younger child and keep measurements regularly.
- Health workers and teachers can arrange for parents to bring babies into school so that children can watch them being weighed and their weight recorded on a chart. The class can take a special interest in one baby, and with the parents' agreement, the baby's growth chart can be brought into school regularly.
- At home, children can measure and keep records of the height of their younger brothers and sisters. All of these measuring activities can be linked with mathematics and science.
- Older children should be measured at least every birthday. Children can make a measuring line on the back of a door or on a wall.
- At home children can help younger brothers and sisters to be well nourished, especially if one of their brothers or sisters has a disability. They can make sure they get enough to eat at family meals and help encourage them to eat by telling stories.
- They can make sure that they are encouraged to eat when they are sick and when they are getting better.

The children can prepare information-gathering sheets to record what they find out. Here is an example.

Different foods and their cost			
Information gathered during .....(month), in the rainy/dry season			
How much can you buy for a fixed amount of money, e.g. five rupees?			
Food	Amount Weight or local household measure	Cost	Comments
Lentils	1.5 kg	2 rupees	
Eggs		3 rupees	There is more protein in lentils than eggs – rupee for rupee.

## Discussing the results of activities

After doing these activities children check what they and others have learned. They can ask questions such as:

- *Why is it important to weigh babies on a regular basis and to keep on weighing and measuring children when they are older?*
- *Do we know how to measure accurately and record measures of height and weight?*
- *Are we able to mark these on a growth chart?*
- *Can we use and interpret the ‘Shakir Strip’?*
- *Have we helped to weigh and measure younger children and babies?*
- *Have we spread messages about the importance of measuring children to check that they are growing well?*
- *Have we helped children who have been ill eat well and grow strong again?*
- *Are we eating enough nutritious foods ourselves?*

## Doing it better

This is an ongoing process. There may be activities that the teacher, youth leader, health worker or the children themselves feel need repeating in order to improve their own understanding and skills towards other people in the community. There may be mistakes that need correcting or written materials that need rewriting to make the messages clearer. It is important that time is spent doing this. Other issues, problems or anxieties may have come up that the adults need to explore further with the children. Poor nutrition, and its causes, is a very sensitive subject. New topics can be discussed and selected with children at this stage.

## USING THIS SHEET

This sheet can be widely used both in school health programmes and in clubs and youth groups. Weighing and measuring babies regularly is an important health message that is easy and popular to introduce

to children. However, all those who use the sheet will appreciate that undernutrition – and particularly its causes – is a very sensitive subject. The adults need to consider when and how it may be possible to involve children in finding out and taking action in a way that does not cause unhappiness or anger to families where children are undernourished. In some programmes children working with adults have helped to identify undernourished children using the arm circumference strip. However, in some situations and cultures this may not be acceptable. If the whole community are consulted and involved then it may be acceptable to carry out these types of activities.

The examples in this Activity Sheet show that Child-to-Child activities can make a big difference to the health of children in a variety of situations.

This Activity Sheet can be used in conjunction with sheets 2.1 **Feeding Young Children 1: Feeding children aged 6 months to 2 years**, 3.3 **Children’s Faeces and Hygiene**, 3.4 **Clean, Safe Water**, 6.3 **Intestinal Worms** and 6.4 **Immunisation**.

For further information, please contact:  
Child-to-Child Trust,  
Institute of Education,  
20 Bedford Way,  
London  
WC1H 0AL, UK.