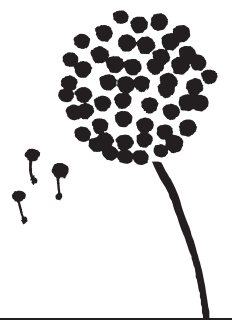


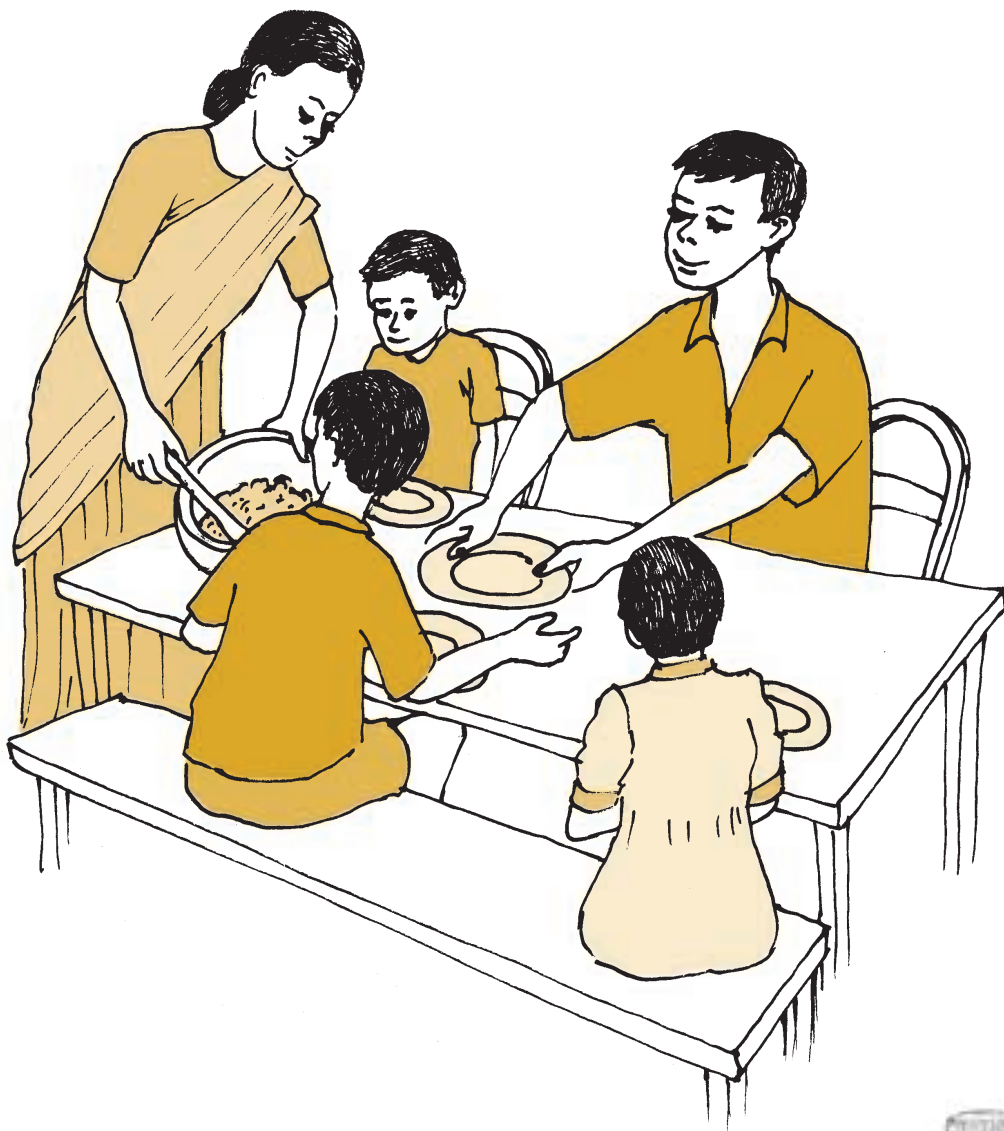
Healthy eating



TEARFUND

A PILLARS Guide

by Isabel Carter



Partnership In Local Language Resources



Healthy eating

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by Isabel Carter

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Healthy eating

A PILLARS Guide

Introduction to PILLARS Guides

These guides are designed for use in small group situations where one or more people are literate and confident enough to lead others in group discussion. They aim to provide material for discussion around a subject either in isolation or as part of a regular group meeting; for example of farmers, literacy trainees or women's group members. Ideally just two or three pages should be used each time, allowing plenty of time for discussion of the issues raised and for carrying out some of the practical ideas suggested. It would be helpful for the discussion leader to have some understanding of good nutrition.

PILLARS guides aim to increase confidence among group members, so that they can successfully manage change within their own situation without the need for outside intervention. They try to build on existing knowledge and experiences among the members or within their community, so that different ideas can be tried out, adapted, and then either abandoned if not found useful, or adopted if found useful.

Healthy eating

This guide looks at the subject of the food we eat. It covers all kinds of topics including an awareness of the nutritional value of different foods, the food needs of different family members and good hygiene practices. It includes ideas for improving our diet with little cost by using wild or traditional foods, drying and preserving foods at harvest time, producing food in door-sized gardens, and recipes. There are pages on the importance of breast-feeding and feeding young children well. It also looks at the difficult subjects of customs and taboos relating to food.

The Bible studies at the back of the guide should be used as an essential and ongoing part of the process. They are best used in small groups, with time for everyone to discuss.

Objectives of this guide

- To increase awareness of the importance of a good diet in maintaining health and resisting disease
- To build understanding of the nutritional needs of pregnant and breast-feeding mothers, young children and older people
- To increase awareness of the foods which are essential to make up a balanced diet
- To increase awareness of the risks of HIV transmission through breast-feeding in order for women to make clear judgements

- To improve the variety of household foods through door-sized gardens, preserving foods and encouraging the use of valuable traditional foods
- To encourage discussion about certain food traditions and taboos which go against good nutritional practice

Anticipated outcomes

- Pregnant or breast-feeding women and young children given more priority when sharing household meals
- Improved health of pregnant women leading to reduced levels of infant deaths
- Fall in child mortality due to improved diet and greater resistance to disease and infection
- Reduced attendance at clinics due to overall improvement in health and disease resistance
- Improved survival rates of healthy babies born to women with HIV/AIDS, through encouraging breast-feeding alone for six months only and then stopping breast-feeding as soon as possible
- Gradual abandonment of unhelpful food taboos and customs

Useful resources

Nutrition for Developing Countries

by Felicity Savage Kind and Ann Burgess

An excellent, detailed and informative book looking at all aspects of good nutrition. It covers essential facts about nutrients, nutritional needs, foods and meals. It explains how to help families with nutritional problems and how to treat malnourished children.

It is well illustrated with over 450 pages and is available from:

TALC, PO Box 49, St Albans, Herts, AL1 5TX

Footsteps Issue 52 published by Tearfund. Available on www.tilz.info

Complementary Feeding

A comprehensive guide to family foods for breast-fed children. This booklet is full of information on the use of complementary foods and the nutritional value of a variety of foods. It gives detailed guidance on all aspects of complementary feeding. The booklet has 52 pages and is produced by WHO. It can be ordered from:

WHO Sales and Marketing Group, Via delle Terme di Caracalla, 00100 Rome, Italy

Nutritious Food for Young Children

A well illustrated and simply written booklet full of ideas and information on feeding young children. The book has 42 pages and is available from:

World Neighbours, 4127 Northwest 122nd Street, Oklahoma City, OK 73120-8869, USA

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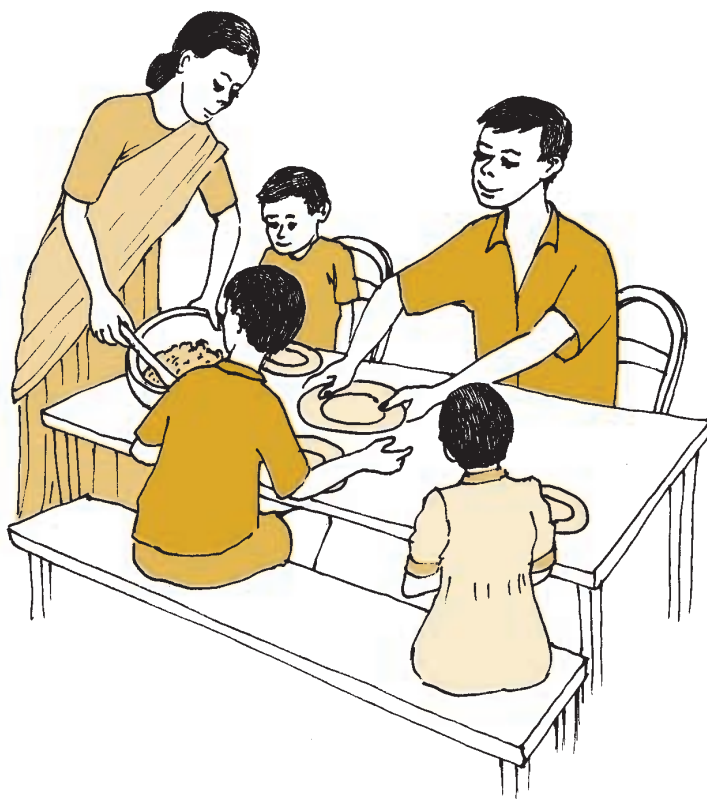
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A healthy diet

Good food is important for good health. Most people depend on one or two staple foods for much of what they eat. This may be a cereal (such as rice, wheat, maize or millet), a root crop (such as cassava, yam or potato), or starchy fruits (such as plantain or breadfruit). However, several other foods must be eaten with the staple food in order to meet our energy and nutritional needs. The types of foods that fill these needs best are:

- pulses (such as peas, beans, lentils and groundnuts) and oil seeds (such as sesame or sunflower seeds).
- foods from animals and fish. These are rich sources of many nutrients but are often expensive. Also, some people do not eat meat because of their religious or personal beliefs.
- vegetables and fruits, particularly dark green leaves and orange-coloured fruits and vegetables.
- oils, fats (such as margarine, butter, ghee) and sugars.

Ensuring a good mix of a staple food with several of these foods at each meal will result in a healthy diet.



Discussion

N1

- What are the main staples we eat in this area? Which other foods do we normally eat with the staple food each day?
- How often do most people in our community eat meat or fish? What prevents them from eating more of them?
- How much is lack of money a barrier to a good diet? Discuss ways in which people could improve the variety of foods eaten at little or no cost. Do people who have plenty of money always eat a good diet?

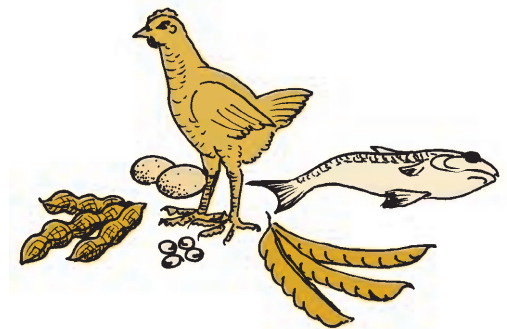
Why we need different foods

The food we eat has three main functions; to give us energy, to build and repair our bodies and to protect us from disease. Most foods have a mixture of nutrients. To keep healthy, we should eat a good mixture of foods each day.

- **Energy foods** help us to work and keep active. These are staple foods such as maize, rice and plantain, fats such as vegetable oil and animal fat, and sugar. Fats and sugars are only needed in small quantities for adults.



- **Building and repair foods** help children grow and repair our bodies. Examples are groundnuts, beans, lentils, milk, eggs and meat. Foods made from milk and any food containing bones that are eaten (such as small fish or pounded dried fish) are good sources of calcium, needed to build strong bones.



- **Protective foods** contain vitamins and minerals, which help the body to work smoothly and give protection against illness. Most fruits and vegetables are protective foods.



Clean drinking water is also important to maintain a healthy body.



Discussion

N2

- What kinds of foods are readily available in our local area? Do people eat a good mixture of staple foods, pulses, fats, fruit, vegetables, meat and fish? If not, consider why not?
- How many different ways can you think of to add pulses, vegetables, oil and fruit to the staple foods eaten in our area?
- What kind of diet do young children in our community eat? Do they have plenty of opportunity to eat meals containing meat, milk products or pulses to help them grow strong, healthy bodies? Is there any way we could improve this?
- Are enough 'protective foods' eaten on a daily basis in local households? How can people add more fruit and vegetables to their diet?
- Why is clean drinking water important to keep our bodies healthy?

Improving a poor diet

A healthy diet is directly linked to good health. It is particularly important for pregnant women, babies and young children. Well-nourished babies and children are much less likely to become sick through disease and infection. Common infections like diarrhoea last longer and are more severe in malnourished children. Once a child is sick, poor appetite can lead to worsening malnutrition and repeated infection that often ends in death. Nearly two-thirds of all deaths in young children are linked to poor diet. Healthy eating is vital for child survival.

People can usually provide staple foods for their families. However, though staple foods provide energy, they will not provide enough of the 'building' and 'protective' foods required. People with few financial resources may find it difficult to buy enough meat, fish, vegetables and fruit to provide a healthy diet. However, there are other ways of obtaining these kinds of food, including the use of traditional foods, wild vegetables, edible tree leaves, rearing chickens or rabbits, gathering and preserving wild fruits and buying carefully in the market.

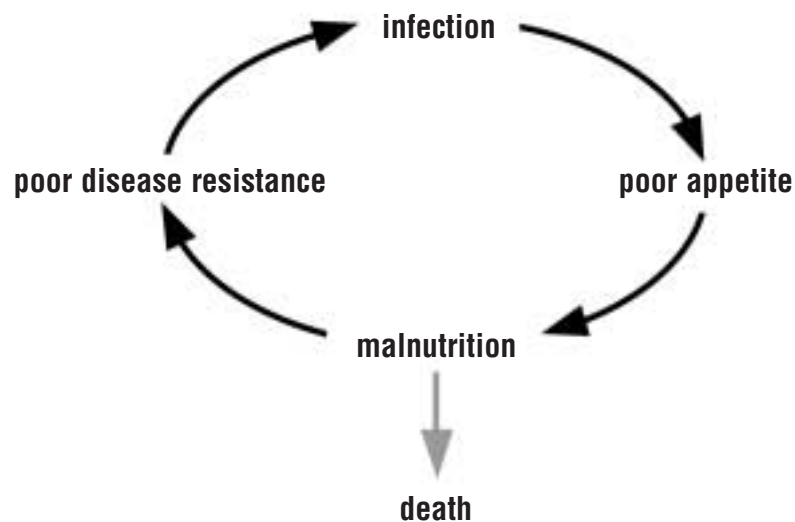


Discussion

N3

- How many of us have heard about the cycle of malnutrition and infection, shown below? Is it true in our community? Can you think of children who have become gradually weaker through poor diet and repeated infection?
- What are the reasons for babies and young children becoming malnourished? How can the cycle of malnutrition and infection be broken?
- What foods from animals are available at low cost in our local area?
- Which fruit and vegetables are available at low cost in our local area?
- How can we encourage people to use more pulses?
- How could more animal foods be made available for eating at home (for example, by building a fishpond, or raising rabbits, guinea pigs or poultry)?

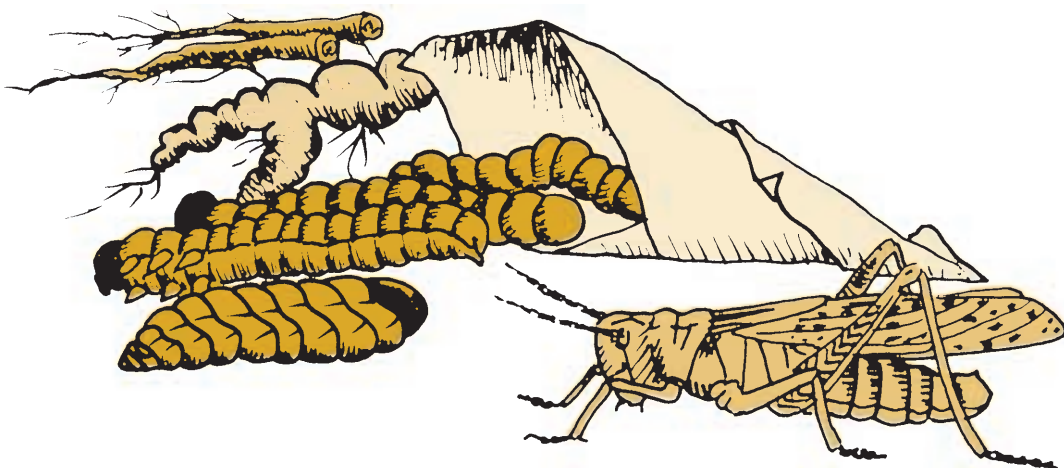
Cycle of malnutrition and infection



Traditional foods

One hundred years ago, the diet of people in our local area was probably much better and more varied than it is today. This is not because people had more money or time. It was partly because they used many traditional foods in their diet. They also processed their own foods. Today, people often buy staple foods that have been processed such as 'white' rice, 'white' bread and porridge. Processing removes the dark outer layer of grain, which contains a lot of vitamins and protein.

Most areas have traditional foods that people gather and eat. Examples of traditional foods that are nutritious include termites, grasshoppers, caterpillars, locusts, flying ants, wild birds and the leaves and roots of wild plants. These are often very high in protein and vitamins and help to improve the diet. Increasingly, however, people consider that these are of little value and place higher priority on more 'western' foods. Also, as people move to towns and cities, they are unable to gather such foods.



Discussion

N4

- What kinds of traditional foods are eaten in our area?
- How are these foods prepared and used?
- Are there other kinds of traditional foods that are still available, but no longer eaten? What are the reasons for this?
- Traditional foods are often only available for a very short time. For example, flying ants may appear on only a few days each year. How could these kinds of foods be preserved so they can be eaten at other times?

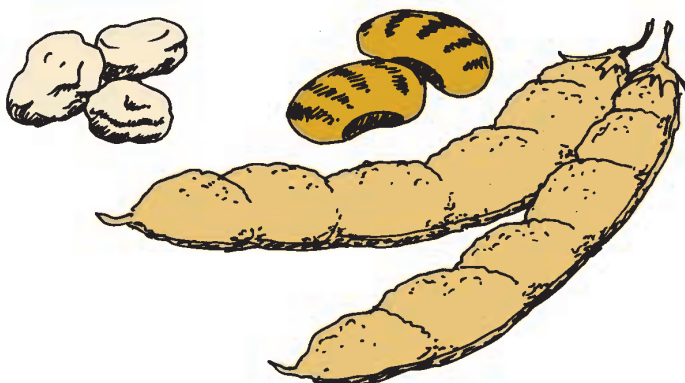
Ideas for using pulses

All kinds of pulses are excellent sources of nutrients. When dried they can be stored easily for a long time. Pulses should be an important part of the household diet.

Pulses are often cooked whole and added to stews. Cooking times can be greatly reduced by soaking pulses in clean water overnight. Rinse and add fresh water before cooking.

Dried pulses can be ground finely either with a pestle and mortar or in a flour mill, to make a very nutritious flour. This can be mixed with flour from your usual staple. A recommended mix is 6–8 cups of flour made from the staple to 1 cup of flour made from pulses. Cooking bread, chapattis or porridge with this flour will improve nutrition.

Some pulses such as groundnuts and soya beans can also be used to produce cooking oil and animal feed.



- How do people in our area use pulses in cooking? What are the most popular meals made from pulses?
- Discuss all the different ways in which pulses could be used to improve our diets.
- How could we encourage people in our area to grow more pulses for household use? Are there new or improved varieties available which could be tried out?
- Pulses can be mixed with any kind of food. For example, cooked pulses could be pounded and added to relishes (an example is given below). How could we add cooked pulses to our meals?

GREEN RELISH RECIPE

- *1 onion*
- *1 cup of flour made from pulses*
- *4 tomatoes*
- *1 bunch of dark green leaves*

Clean and chop up leaves. Cut up onion and tomatoes.

Cook the leaves, onion and tomatoes in a small amount of water until they are soft.

Add one cup of water and one cup of flour and cook for ten minutes until only a small amount of liquid is left.

Vegetables and fruits

Many people believe that newly introduced vegetables such as lettuce and cabbage are better than traditional vegetables. In fact the opposite is usually true. Locally available vegetables such as spinaches usually contain many more nutrients. Dark green vegetables are good sources of vitamins A and C which help give protection against illness. Even a small quantity of leaves added to a meal improves the food value.

Try not to overcook vegetables because long cooking destroys some vitamins. Add onions, tomatoes or oil to improve their flavour if necessary.

Plant vegetables throughout the year to provide food all year round, particularly during those times of year when vegetables and fruits are in short supply. Waste water from rinsing clothes and washing can be used to keep small quantities of vegetables growing.

The leaves and fruits of many trees can also improve family nutrition. They often have greater drought resistance than vegetables because of their extensive root systems. Plant fruit trees in corners of the garden where they do not shade vegetable crops. Pawpaw, guava and citrus are all useful garden trees and their fruits contain high levels of vitamins.



Discussion

N6

- Dark green leaves are a good source of vitamins A and C. Name those available in our area. What can families do during those times of the year when few vegetables are available?
- What wild plants are traditionally used in our area as a source of dark green leaves? Where can these be obtained?
- How could we encourage people to grow and eat more dark green leafy vegetables?
- What trees in our area produce leaves that can be eaten? Can people gather these leaves free of charge? Where could people get seeds or young trees of species such as moringa – which produces very good leaves and beans?
- How could we encourage people to grow and eat more fruit for household use? Is there a nursery where people can buy young trees?

Preventing anaemia

Anaemia is one of the most common conditions resulting from a poor diet. It is often caused by a lack of the mineral iron in the diet. Iron is needed to build strong blood. The most common signs of anaemia are tiredness, and difficulty in working and learning. A simple check for anaemia is to look at the colour of the palms, lips, tongue or the skin inside the eye socket. In healthy people these should be red. In people with anaemia they will be pale pink.

The need for iron increases during growth and pregnancy, so children and women are especially likely to have anaemia. Anaemia in pregnant women can lead to small or premature babies and sometimes the death of the mother. Staple foods contain little iron. Foods with a lot of iron include red meats, liver, kidneys, blood and other kinds of offal. Egg yolks, dark green leaves and pulses are also high in iron, but this iron is not easily used by the body. However, eating fruit rich in vitamin C such as oranges and papaya, at the same meal, will make it easier for the body to use the iron.

Sometimes foods such as wheat, bread or cereal are available with extra iron added.



Discussion

N7

- How can we increase the iron content of our most common meals? How could egg yolks, meat, liver, dark green leaves or pulses be added? How easy would it be to encourage people to eat fruit after their meal?
- Gently examine the skin inside the eye socket, lips and tongue for signs of anaemia. How common is it to find very pale skin?
- Why are women more likely to be anaemic than men?
- Children with anaemia have less energy for playing, working and learning. How will this affect them as they grow up?
- Are iron tablets available for children or pregnant women in our area? How much do iron tablets cost?

Personal hygiene

Good personal hygiene plays an important part in good health. We should wash ourselves, and our clothes, regularly with soap and water to prevent the build up of dirt. Teeth and nails should be cleaned regularly.

It is really important to wash our hands immediately after using a latrine or after disposing of child faeces. From the instructions provided on page 19, you could make a tippy tap and hang next to the latrine. They are simple to make, use very little water and provide an easy way to make sure soap is available.

It is essential to wash hands well with soap and water before handling food. Hang a 'tippy tap' near the cooking area and use it regularly, both before handling food and in between handling uncooked and cooked foods.

Wear clean clothing when preparing food. Never cough, sneeze or smoke over food that is being prepared for eating. Take particular care with hygiene if you are ill and still need to prepare food. This will reduce the risk of passing on your infection. Always cover cuts and sores on your hands.



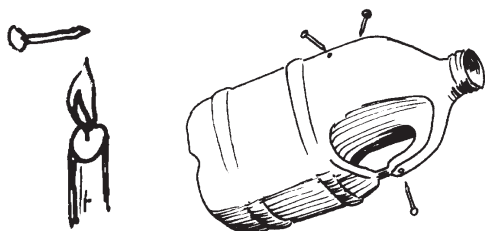
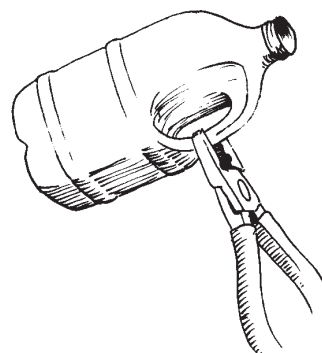
Discussion

N8

- Why is good personal hygiene important?
- What will happen if we do not wash ourselves and our clothes regularly? What kind of diseases and pests like to spread in dirty conditions?
- How do infections spread? It may be very helpful to have a health worker explain more about this. What are the risks of spreading infection if someone who is ill prepares food?
- Have you seen a tippy tap in use? What are the advantages of using a tippy tap rather than using a bowl of water? Could you find a suitable plastic bottle and make one (or make one for each member of the group)? Discuss any problems and work out solutions for them.

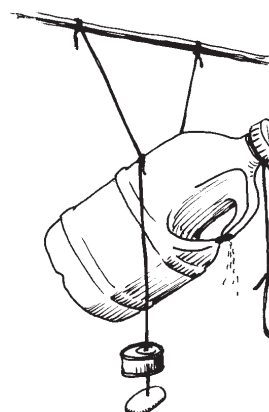
How to make a tippy tap

- 1 Warm the base of the handle over a candle and then pinch gently with pliers to seal it tight so water cannot flow through.



- 2 Heat the point of a small nail over a candle and make three holes as shown.

- 3 Thread string through the two holes on the back and tie the bottle to a stick. Attach soap (with an empty tin can above it to protect it from rain) and make a handle which is pulled to let out a trickle of water.



Food hygiene

Make sure all pans, dishes and tools used in preparing food are clean. Dry them on a drying rack and avoid using a cloth to dry them.

Uncooked meat and fish, and uncooked vegetables with soil on them, should never touch cooked foods. After handling uncooked food, wash hands well before handling cooked foods.

Some food such as milk, fish, cooked meat, cooked rice and other cereals will spoil more quickly than other kinds of food. Once cooked, these foods should not be left at warm temperatures for more than two hours before eating.

Flies carry disease, so food should always be covered. When preparing food, put waste food into a covered container to avoid attracting flies. Use a pit for rubbish that is a good distance from homes. If possible, cover with earth each time the rubbish pit is used.



Discussion

N9

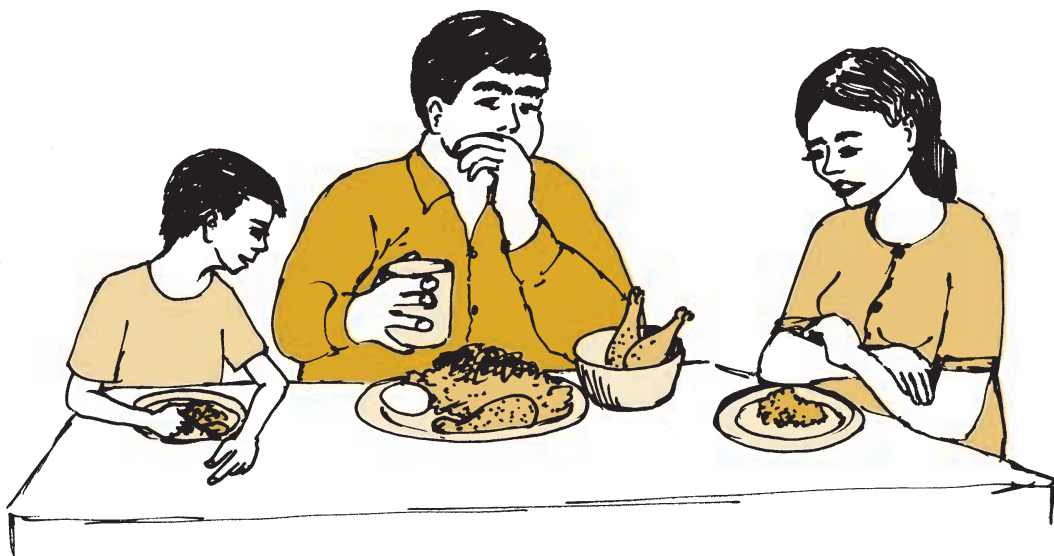
- What can be used to keep food and drinks covered at all times?
- How do people dispose of waste materials in our area? Are there community waste pits? If so, are the surroundings kept clean to reduce flies and vermin? If there are no waste pits, could the community make some as a good way of improving health?
- How do flies spread disease? What can we do to prevent them spreading diseases?
- How common is the use of drying racks to dry cooking utensils in our area? What are the advantages of using them? How could more people be encouraged to make and use them?

Customs and taboos

All cultures have various traditional beliefs and customs concerning food. Sometimes people eat special foods at festivals. Some foods may be avoided on particular days. Foods that are avoided in one culture may be valued in another. Some foods may be forbidden completely in certain cultures or religious groups but enjoyed in others.

Most of these beliefs have little impact on nutrition but there are some that have a large impact. For example, in many cultures pregnant or nursing women are not supposed to eat eggs. However, eggs are a very nutritious food. Children may also be prevented from eating foods that would be of real nutritional benefit.

Changing unhelpful food customs is difficult to do and can take a lot of time.



Discussion

N10

- What customs, traditions and taboos in our own culture limit the variety of foods eaten?
- Are any of them unhelpful and damaging to good nutrition?
- Are any kinds of foods considered bad for pregnant or breast-feeding mothers? Why is this? Are our answers based on our traditions or on good nutritional teaching?
- Should some of these taboos be challenged and if so, how could this be done sensitively?
- Eggs have a very high nutritional value. Are there customs which do not allow young children and pregnant and breast-feeding mothers to eat eggs? How could they be allowed to eat eggs? How can unhelpful practices be changed?
- What customs do we have that may prevent young children from eating a nutritious diet?

Herbs and spices

Herbs and spices are foods with really strong flavours. Every local area will have some familiar herbs or spices. These may include garlic, ginger, black pepper, chillies, coriander, cumin, turmeric and cinnamon.

Those of us who cannot always afford to buy relishes to eat with our staple food, will find that a small amount of money spent buying spices and herbs will really improve our meals. Some spices and herbs can be gathered wild in the forest and dried. Fresh herbs, such as mint and coriander, add flavour and also add vitamins to our meals.

We can learn about the ways other cultures use spices and herbs. We can be open to learning about new ideas and flavours from them. We can also learn by talking to people in markets, making friends with people of other cultures or observing different ideas while travelling to visit family or friends.



Discussion

N11

- What are the common herbs that we use in cooking in this area? Are they available through the year?
- Are there any herbs that were used traditionally that are now less common? Is it possible to grow these in our gardens?
- What spices do we use in our cooking? How expensive is it to buy these? Can we mix our own spices at home?
- Are there people of other cultures living in our region or country? How could we learn about their cooking methods and their use of herbs and spices?
- Are we interested in trying new flavours, or do we prefer our food as it is?

Door-sized gardens

Many homes, particularly in towns and cities, have little or no room for growing vegetables. However, outside many homes is an area of ground that could be used to make a small garden.

Mark out a space the size of a door or bed. Dig out the soil until it is nearly knee-deep (**A**, on opposite page). If the soil is very hard this will not be easy! Lots of people working together will help. Keep the fertile topsoil (darker colour) separate from the subsoil (lighter colour and more stones).

Line the hole with grass and leaves (**B**). Encourage families to bring their household waste of vegetable peelings, waste paper and eggshells for that day, and tip it into the hole. Add animal manure if available. When the pit is half full pour on water to soak the waste. Then add the subsoil, followed by the topsoil (**C**).

Plant vegetable seeds and herbs. Useful plants include tomatoes, spinach, traditional leafy vegetables, peppers, beans, onions and all kinds of herbs. Plant taller plants such as tomatoes and climbing beans in the middle. Cover with a thin layer of grass, straw, rice husks or similar and water well.



Discussion

N12

- How many homes are there in our area where this idea could be tried? Could this idea be used in refugee camps?
- This idea often works best if a number of families agree to work together, building one garden each week. How could this work in our community?
- Would there be enough waste water from washing available for such a small garden? (Very soapy water should not be used, but rinse water can be used.)
- How useful would it be to have a regular supply of fresh herbs and vegetables next to the house? Would a door-sized garden improve our meals?
- What problems would there be in caring for such a garden (for example, keeping away goats, chickens or thieves)? How could they be solved?



A



B



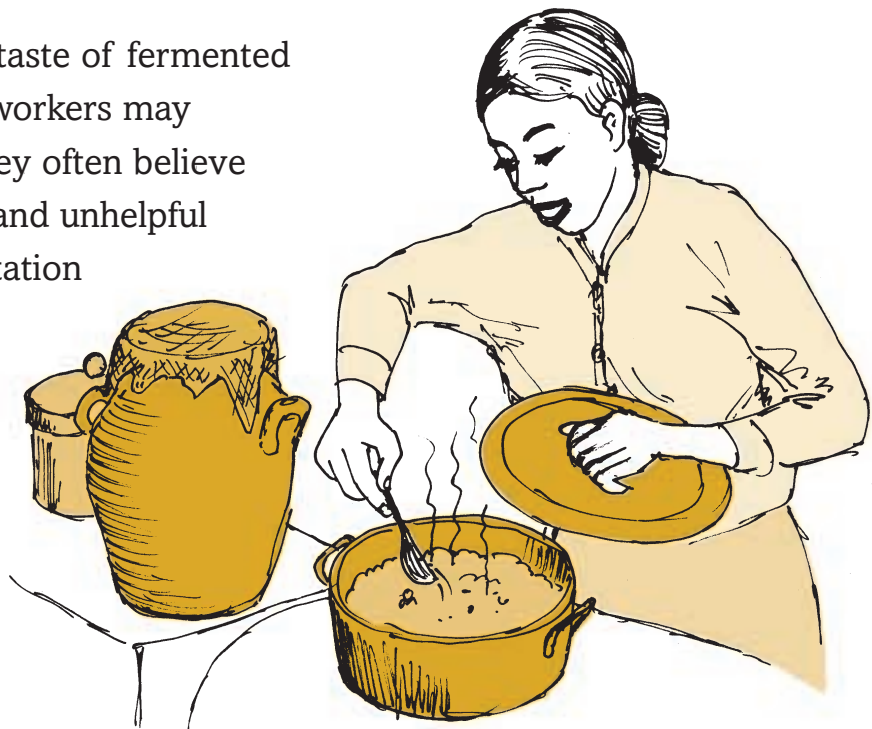
C

Fermenting foods

For many centuries, people have used the technique of fermentation to prepare foods. Examples are fermented maize in Ghana, fermented legumes in Asia and fermented millet porridge in East Africa. This kind of fermentation does not produce alcohol.

Food is usually fermented for two days before use. During fermentation, bacteria that are naturally present in some foods cause a simple chemical change to take place. This makes the food taste slightly sour and improves the taste. It also means that germs which cause diarrhoea cannot grow so easily in the food. Mothers often have no time to prepare fresh food for each meal for young children. Giving them previously cooked food can result in infections and diarrhoea. However, when fermented food is used, the risk of infections and diarrhoea is greatly reduced. Fermentation also makes the food easier to digest and makes it easier for the body to use the iron in the food.

Many people prefer the taste of fermented foods. However, health workers may discourage their use. They often believe these are old fashioned and unhelpful foods. However, fermentation is a traditional process which is still of great value.



Discussion

N13

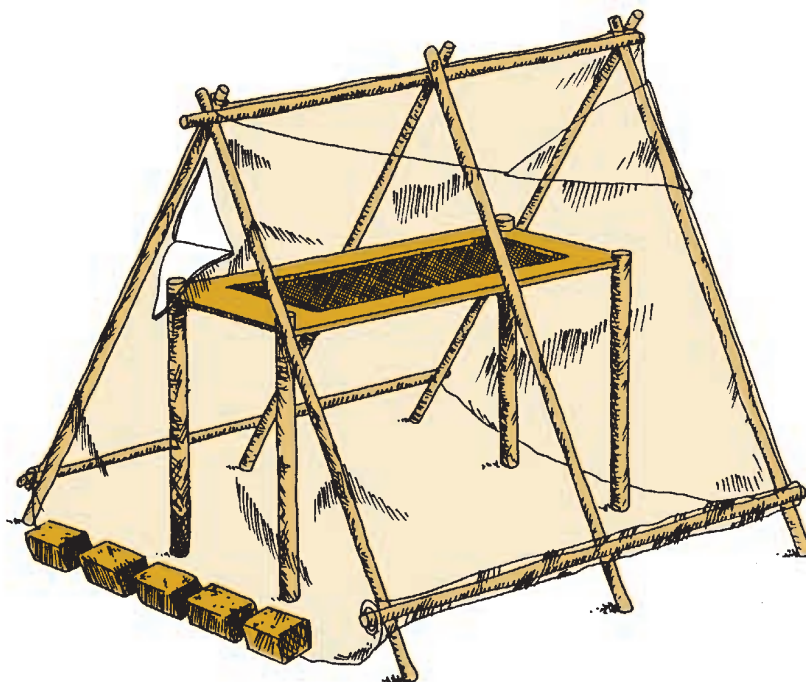
- Is it common for mothers in our local area to cook one meal a day and prepare enough food so the leftover food can be used for the rest of the day? Why is this?
- Do people in our area eat fermented foods? What are the names of these foods?
- How often do children in our community get diarrhoea? What do mothers think about using fermented food for young children?
- If the process of fermentation is allowed to continue for more than two or three days, the food will become too acid to eat. How long do people traditionally allow food to ferment in our area? What happens to any fermented food that is left for more than two days?
- Are there any ways in which we could encourage the use of fermented foods?

Drying vegetables

Many vegetables, herbs, spices and fruits can be preserved by drying. Tomatoes, onions, chillies and herbs are examples of crops that are easy to dry and store. Drying vegetables means that they can still be used months after harvesting. It can improve household nutrition during times when few fresh vegetables are available.

Cut up vegetables into slices or small pieces to encourage faster and even drying. Keep the food clean. If possible, dip vegetable pieces into a litre of boiling water containing two large spoons of salt and a soda bottle-top full of potassium metabisulphite, if available, as a preservative.

Simple dryers, like the one below, speed up the drying process, keep off flies and insects, and give some protection from sudden rain storms. When fully dry, store in airtight containers or plastic bags. Check regularly for mould. Dried vegetables can be added to stews and soups for flavouring.



Discussion

N14

- Do people dry food in our local area? What are the advantages and disadvantages of drying food?
- What containers could people use to store dried fruit and vegetables that keep out the air?
- What vegetables are available locally that might be useful to dry? How can we experiment and find out which can be dried effectively?
- How easy would it be to encourage people to add dried vegetables and herbs to their cooking? How could we encourage this?
- Is it possible to obtain preservatives such as potassium metabisulphite from pharmacies or health dispensaries? How much do these cost?
- Could we build a drier like the one shown in the picture? The frame could be made from wire, wood or bamboo and covered with clear plastic. One end is left loose for entry and closed with stones or bricks. The sides can be rolled over a pole to control the temperature. Vegetables and fruit are placed inside on a wire drying frame raised about half a metre above ground to allow air to move around.

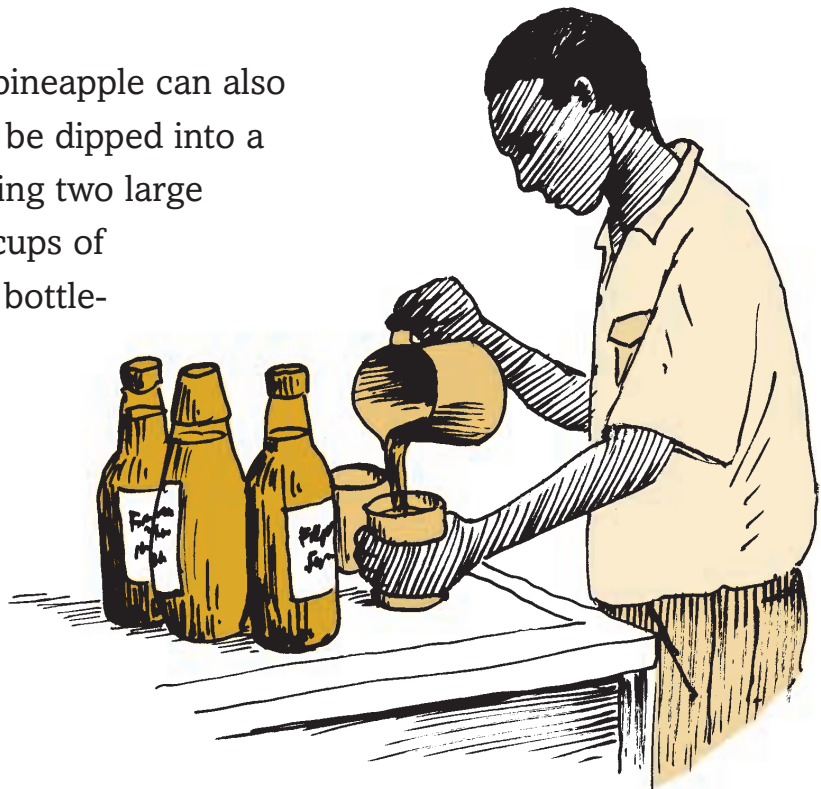
Preserving fruits

Fruits tend to ripen at the same time of year. For several weeks there may be large amounts of mangoes, guavas or citrus, for example. During the rest of the year there may be little or none available.

Some fruits can be made into juice – particularly citrus fruits such as limes and lemons. Place the juice in a pan and bring almost to the boil, cover and allow to cool a little before pouring into clean bottles with tops. Adding a pinch of potassium metabisulphite as a preservative will keep the juice from getting spoilt. When serving, mix with sugar and water to taste.

Many fruits make good jams if plenty of sugar is available. Fresh fruit is chopped up and cooked with sugar and a little water. Jam tastes good when eaten on bread or chapatti.

Fruit, such as mangoes and pineapple can also be dried. Fruit pieces should be dipped into a litre of boiling water containing two large spoons of lemon juice, four cups of sugar, and if possible a soda bottle-top full of potassium metabisulphite, a preservative. Dried fruit can become a cash crop for selling locally.



- What usually happens when fruit crops ripen? How much fruit is wasted? How easy is it to sell fruit at harvest time?
- What methods do people use at present to try to store harvested fruit?
- Would any of these new ideas for preserving fruit be useful in our community? Which of these suggested ideas could we try out together?
- Would people in nearby towns and cities buy our dried fruit? How could we prepare, sell and market the fruit there?
- Do people drink fresh fruit juice or do they prefer sodas? Compare the cost of fruit juice and sodas. Which is better for good health?
- Do people in the local area eat jam? Have any of us ever tried making jam? What fruit could we use to try this out?

JAM RECIPE

Many fruits such as mangoes, cape gooseberries, raspberries and guava all make good jam. If possible, find a jam recipe. The recipe below is a very general one. You may need to change the quantities of water and sugar a little.

- *Wash and chop up ripe fruit into small pieces. Remove any pips. For every two cups of chopped fruit, add just a 1/2 cup of water (less if the fruit is very juicy).*
- *Cook the fruit in a large pan until very soft (usually 15–20 minutes but longer for citrus fruits).*
- *Then add one cup of sugar for every one cup of fruit. Stir well and boil for 10–20 minutes until it begins to set.*
- *Test for setting by dropping a small amount of jam onto a cool plate. After a few minutes, push it gently with your finger. If it wrinkles and forms a skin, it is ready. If it does not, boil for longer and try again. You may need to add a little more sugar.*
- *Take clean jars with lids that close. Put a damp cloth around each jar before pouring in the hot jam (this stops the jar breaking). Put on the lid immediately and allow to cool. If the jam sets firmly it will keep for a year or two. If it does not set well, eat it within a month or two.*

People with special food needs

Our food needs change through our lives. In the first few years of life, plenty of foods for building and protecting the body are necessary to build strong healthy bodies. Older children and adults who lead busy, hard-working lives, need larger amounts of staple foods for energy.

We will look later at the special needs of babies and young children. Pregnant and breast-feeding mothers are eating not just for themselves but for their baby too. They need plenty of all kinds of foods. Women also need plenty of iron, vitamin A and calcium throughout their lives.

Elderly people become less active as they grow older. They need fewer staple foods, but need plenty of foods to repair the body to help them resist infection. Sometimes they find it difficult to eat well, because they have little money, are unable to cook, have lost their teeth or suffer from ill health.

People who are sick or have HIV or AIDS, need plenty of nutritious foods to help them fight off infection. However, they often do not want to eat. This is why people who are sick often lose weight. They need encouragement to keep eating. Provide small portions of tasty food regularly. Give foods that are easy to eat, like soup.



- As babies develop, both inside their mothers and while breast-fed, they need a lot of calcium and iron to build strong bones and blood. What kind of foods are rich in calcium and iron (look back to pages 6 and 16)? Which are easily available in our area?
- What problems do elderly people have in providing food for themselves in our community? How can their families help support them?
- What foods are traditionally given to people who are sick? Are these helpful in strengthening them?
- How do people care for and feed children who are sick in our community?
- Diarrhoea is very common in young children. It is very important to keep feeding a child who has diarrhoea, as well as giving plenty of liquid. How can we encourage people to do this?

QUANTITY OF RELISH

A simple guideline to encourage good nutrition is to give everyone the same amount of relish (whether vegetables, meat or pulses) but to vary the amount of staple food provided. Children, pregnant or breast-feeding women, sick people and older people all need the same amount of relish as a working man.

Breast-feeding

During the first six months of a child's life, breast milk alone is the ideal food. It contains all the nutrients and water needed for healthy growth. It also provides good protection against many common infections.

Breast milk continues to be an important source of nutrients until a child is at least two years old. However, after six months of age, all babies need increasing amounts of additional foods, called complementary foods, before eventually changing to family foods alone. Without a good mixture of these additional foods, babies will fail to grow properly.

Mothers with HIV have a difficult choice, as the HIV virus can be passed on to the baby by breast-feeding. **However, if the baby is fed only breast milk for six months with no other liquid or food at all, and the mother then stops breast-feeding as quickly as possible, the risk is small.** On average, one in every 20 babies may become infected. Research suggests that for every child dying from HIV through breast-feeding, many more die because they are not breast-fed. If babies are bottle-fed in poor conditions where it is difficult to sterilise bottles and water, they are many times more likely than breast-fed babies to die from diarrhoea, pneumonia or other causes.



- People often believe that bottle-feeding is the best way to feed a baby. Is this belief common in our area? Why?
- What can we do to tell people that breast-feeding is safer, healthier, free and much better for all babies (unless the mother is HIV positive and can provide a safe, clean alternative source of milk)?
- How much do people know about the risks of passing on HIV through breast-feeding? Are the figures (given below) a surprise? What do you think the best choice would be for women who are HIV positive in our area?
- When do people in our area traditionally start giving food to babies? Can we encourage them to begin at around six months? Do people help babies to gradually get used to eating complementary foods?

BREAST-FEEDING AND HIV

The longer breast-feeding continues, the greater is the risk of HIV infected mothers passing on the HIV virus to their babies.

One in every 20 babies will become infected if breast-fed for six months

Two in every 20 will become infected if breast-fed for a year

Three in every 20 will become infected if breast-feeding continues for two years.

Feeding babies

Children who are well fed during the first two years of life are more likely to stay healthy for the rest of their childhood. Breast-milk alone can no longer provide all the energy and nutrients needed by a young child after six months of age.

Complementary foods may be specially prepared foods, or can be made by adapting family foods. They should be mashed to make them easy to eat and should be high in nutrients. They should be given in small amounts three times a day at first, increasing to five times daily by 12 months. Start with a few teaspoons and gradually increase the amount and variety.

Complementary foods need to meet all the nutritional needs of the growing child. The most difficult needs to fill are usually:

- energy – from fats and sugar, as young children cannot eat enough staple food
- iron and zinc – from red meats, offal, egg yolks, pulses and dark green leaves
- vitamin A – from red palm oil, green and orange coloured vegetables and egg yolks.

Adding a small amount of fat or oil to a child's meal gives extra energy and helps make food soft and tasty.

Many health centres keep a chart of a young child's weight. Monitoring their growth is a useful way to know if a child is eating enough and is healthy.



- At what age do most children start complementary foods in our area. Discuss whether this is too early or too late.
- Are foods from animals eaten in our area? Which of these are regularly given to young children?
- A good mix of complementary foods each day is:
 - *a staple + a pulse + an animal food + green leaves or an orange-coloured vegetable or fruit.*

Families can use all these foods to make one meal, or they can use, for example:

- *staple + pulse + green leaves at one meal*
- *staple + animal food + fruit at another meal.*
- Do families in our area usually provide these good mixes of food? If not, how could we encourage them to do so?
- Fat and sugar are very important sources of energy for young children. How can mothers provide more fat and sugar in their children's diet?

OTHER IDEAS FOR FIRST COMPLEMENTARY FOODS

- Mash avocados, bananas, or ripe papaya
- Add groundnut paste, oil or milk to porridge
- Add a small amount of pounded fish or chicken with steamed, green leaves to the staple food
- Add an egg yolk and pounded lentils to the staple food

Improving porridges and soups

Porridges prepared from the staple, and soups, are often used as early complementary foods. However, these are usually watery and contain little energy and few nutrients.

To improve the nutritional value of porridges and soups:

- Use less water and make a thicker porridge.
- Replace some (or all) of the water with milk when making porridge.
- Add oil, sugar, margarine or ghee to porridge.
- Add groundnut or sesame seed paste to soups.
- Take out a mixture of the solid pieces in soups such as beans, meat or vegetables, and mash well with the staple food. Soften with a little margarine or oil for extra energy.
- Toast cereal grains before grinding them for flour. Toasted flour does not thicken much, and uses less water to make porridge.



- How do mothers usually prepare porridge to feed to babies? Do they normally add anything to make these more nutritious?
- What foods could be added to porridge to improve the nutritional content? Are there beans, groundnuts, lentils or mung beans available?
- Do people normally roast grains before milling? Could this be done easily?
- Are there any special flours (as in the recipe below) available in the local area that would help mothers with little time to quickly produce nutritious food for their babies? Do large companies produce these? Could a small group of women in our community produce and sell these nutritious flours?

BABY FOOD RECIPE

- *Three parts roasted cereal (maize, millet, rice, sorghum or wheat). Use a mix of two cereals if possible.*
- *One part roasted pulse (soybeans, groundnuts, lentils, beans, grams and peas). Use a mix of two of these if possible.*

Clean the grains and pulses well, roast them well (separately) and grind into fine flour (separately or together).

Store the flour in a container which keeps out air for one to three months.

The flour is stirred into boiling water and cooked for a short time to make porridge. Salt should not be added.

Encouraging young children to eat

Mealtimes should be happy times and an opportunity for the family to spend time together. Feed young children with the rest of the family but give them their own plates so they get their share of the food. Cut up food into small pieces so that it is easier to eat. Encourage children to be independent. Young children like to feed themselves but are messy eaters. Make sure most of the food reaches their mouth!

Encourage children by talking to them, telling them how good the food is and how well they are eating. Try using mealtimes to improve children's development. For example you can talk about the food, what it tastes like, name the foods and colours.

Don't force children to eat in a hurry. Don't insist they eat up all their food if they really don't like it. Make sure mealtimes are enjoyable!



Discussion

N20

- How do we encourage young children to develop good eating habits in our local area?
- Are young children normally given their own plate? If not, discuss how appropriate it would be for this to be done.
- What happens to children who find it hard to eat much when in a big group of people? Is time given to encourage them to eat more?
- Sometimes parents are working or not around for most mealtimes. How can they make sure their child or children are enjoying mealtimes and getting a healthy diet? What can they do if they feel unhappy about the food practices of those caring for their children?
- What food, if any, is usually given to young children between meals? What do older children eat?

Healthy snacks

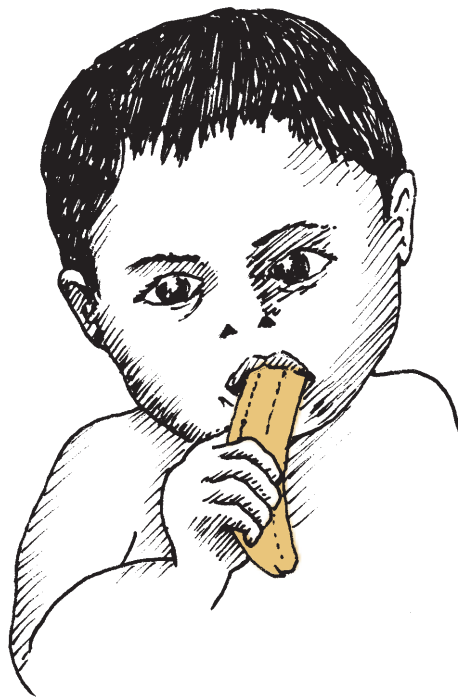
Snacks are foods eaten between meals. Nutritious snacks are an easy way to give a young child extra food. Snacks should be easy to prepare.

Good snacks provide both energy and nutrients. Examples are:

- banana, paw-paw, avocado, mango and other fruits
- yoghurt, milk, puddings made with milk
- bread or chapatti with butter, margarine, groundnut paste (peanut butter) or honey
- biscuits, crackers, cooked potatoes.

However, not all snacks are good for children (or adults). Many have a lot of sugar (which causes teeth to decay), or salt and are low in nutrients. Examples are:

- fizzy drinks (sodas)
- ice lollies/lollipops
- sweets.



- What kind of food do children in our area eat between meals when they are hungry? Are these good snacks?
- What other kinds of local foods are there that could be used as healthy snacks? Would these be expensive?
- Are there any foods readily available in our local area, that could be used to set up a small business to make snacks? Possible ideas could include dried fruit, roasted maize or deep fried potato crisps.
- Some snacks, particularly sodas, are made by companies that spend large amounts of money in advertising. People feel they must buy these, even though they are expensive and have no nutritional benefit. Some may even be harmful to health as they contain so much sugar. How could we encourage people to buy less of these? What could people drink instead?

BISCUIT RECIPE

Here is a very easy recipe to cook biscuits in an oven or on top of a fire or stove.

- *½ cup sugar*
- *½ cup fat*
- *pinch of salt*
- *two cups wheat flour (or a mix of one cup wheat and one cup other flours such as soya or millet)*
- *two small spoons of a sweet spice such as nutmeg, ginger or mixed spice if available*
- *½ cup finely chopped nuts (pound to a paste if for small babies).*

Mix all these ingredients together to make a very thick dough with either milk, an egg or water. Either roll out thinly and cut into small squares, or take small spoon-sized pieces of dough and work into a small round shape.

If using an oven, cook on a tray for 15 minutes at medium heat. If cooking over a stove or fire, use a thick metal frying pan or sheet of metal. Cook very slowly over a cool heat, again for about 15 minutes, turning over once.

Fortified foods

Fortified foods have special nutrients added by the manufacturers. Sometimes these are added to replace those lost during processing. For example, milling rice or cereal grains removes several useful vitamins and minerals. Sometimes they are added because people often lack enough of these in their diet. Fortified food often costs the same as unfortified food and is generally useful. However, a good balanced diet should already provide these nutrients for most people.

One of the most common nutrients to be added is vitamin A, which is often added to margarine, ghee and milk powder. Iron is sometimes added to wheat flour, bread and cereal products, particularly weaning cereals. Vitamin B may also be added to cereals and bread.



In many areas people do not get enough of the mineral iodine. Lack of iodine can cause children to learn more slowly and cause the growth of goitres in the neck. Women who lack iodine are more likely to have miscarriages, stillbirths or babies born with deformities. Always buy iodised salt if it is available.



Discussion

N22

- What foods do you buy that are fortified? If you cannot think of any, read the labels carefully on packets and tins to check.
- What are the benefits of buying fortified foods?
- Are there any disadvantages to buying fortified foods? What are these?
- Do any local people suffer from goitres on their necks? If so, is iodised salt available? How could local shopkeepers be encouraged to sell salt containing iodine to prevent other people developing goitres?
- Is it possible to buy wheat, bread or cereals fortified with iron in our local area? If not, what other sources of iron are available? (Look back to page 16.)

Bible studies

These Bible studies are designed to use in small groups. They may provide a useful introduction to a meeting where different topics from the Guide are being discussed. Choose a study that will be linked to the topic you plan to study or that is relevant to your situation. During the studies, encourage people to think about what they read, to discuss the meaning and the implications of what they learn and, finally, to pray together about what they have learnt.

BIBLE STUDY 1

Food traditions and customs

All cultures develop a variety of traditional beliefs and customs concerning food. Sometimes there are certain foods that people eat at special festivals. Some foods may be avoided on certain days. Certain foods that are avoided in one culture may be valued in another. Most of these beliefs have little effect on nutrition. However, sometimes certain taboos or customs may have a considerable impact on health.

Read Acts 10:9-16

- Why did Peter refuse to kill and eat the animals and birds shown to him?
- What was God's answer to Peter?

The Jewish tradition considered certain foods unclean and for Paul these taboos were part of his life. But then God challenged him on this. God is able to make all things clean and to change people's way of thinking.

- God showed Peter that He could make all things clean. He used 'unclean' foods as an example, to challenge Peter about his refusal to have any social contact with non-Jews. Do we have similar unhelpful beliefs about certain groups of people? Is God challenging us about these beliefs?
- Do we have any unhelpful customs and taboos concerning food?
- How could we try and change people's thinking about these?

BIBLE STUDY 2

A wise choice of diet

Read Daniel 1:1-7

This story comes from a time when Judah was invaded and captured by the Babylonian king, Nebuchadnezzar. He wanted to teach people in the country he now controlled about his own culture and religion.

- Why did King Nebuchadnezzar want to train some young Israelites to become officials in his service? Discuss how he planned to do this.
- Who was chosen for this training?

Despite his young age, Daniel wanted to make it clear he did not want to lose his own beliefs and traditions as a Jew.

Read verses 1:8-17

- Why do you think Daniel and his friends did not want to eat the royal food and wine? Can you think of any problems that come from eating rich food and wine?
- How did Daniel deal with the official who was unhappy with his refusal to eat the King's food?
- What were the long-term results of the decision made by Daniel and his friends that we read about in verse 17?

BIBLE STUDY 3

Sanitation

Read Deuteronomy 23:12-14

There is very little teaching in the Bible about sanitation apart from these verses. The Israelites were given these clear instructions thousands of years ago. However, a huge number of people still lack access to good sanitation.

Verse 14 talks about how this command was given to keep the camp holy, but the practice would also have kept the camp healthy. God was aware of the need for good sanitation long before people understood about the diseases caused by poor sanitation. Physical cleanness is linked to moral holiness.

- Do our sanitation practices and personal hygiene show that we care about our own health and the health of our families?
- Does our way of life cause others to suffer illness because of lack of hygiene in and around our homes?

BIBLE STUDY 4

The good wife

Read Proverbs 31:10-31

In these verses we read about a model wife. Many bible scholars believe that rather than being about an ideal wife, this story is really about wisdom and how we can learn to be wise. This lady's behaviour is wise and worthy of praise in every way. She sets an example that we can all learn from, even if we do not manage to meet all these characteristics!

Read verses 14-17

- From where does she get food for her family? What does this mean?
- How does she prepare food for her family? When does she do this work?

Read verses 20-31

- Does she care about others as well as those in her immediate family?
- What is her reward from her family for all her hard work?
- What does it mean to 'fear the Lord' in verse 30?
- What can we learn from this lady?

BIBLE STUDY 5

God's provision of food

Read Genesis 1:11-13 and Genesis 1:29-31

- Discuss the main foods that are eaten in our area. How many of these come from seed-bearing vegetables or trees?
- Who does God make a covenant with regarding food?

Read Genesis 9:1-5

God makes a new covenant concerning food, this time with Noah and his family.

- What has changed from the time when the first covenant was made?
- What new food was available? Why do you think there has been a change?
- Why do you think God told people not to eat meat with blood in it?

BIBLE STUDY 6

Our bodies as a temple of the holy spirit

Read I Kings 8:12-21

In old testament times, the temple was thought of as a building where God lived and it was set apart for His worship.

- How did Solomon describe the temple he had built?

Read Psalm 51:16-17

Old Testament worship placed an important emphasis on the need for animal sacrifice in order for sins to be forgiven.

- What kind of sacrifice does God want?

Read John 2:12-22

In New Testament times Jesus teaches that there are other ways of thinking about the temple.

- What are these new ways of understanding the meaning of the temple?

Finally, read I Corinthians 3:16

The role of God's temple was to bring inner spiritual cleansing. Christ's sacrificial death has now made this possible for each one of us, through faith in Him and he sends us his Holy Spirit to guide us.

- What is meant by the temple in this verse? Who lives in this temple?
- How should this affect the way we care for and feed our bodies?

Glossary of difficult words

anaemia	a condition often caused by a lack of iron in the diet, so that the blood becomes weak. Other causes are malaria, hookworm, HIV and other infections
community	people living in one local area, often with the same culture and similar interests
customs	the long established habits or behaviour of a society
faeces	solid waste material produced by the body from the back passage
fermentation	the action of yeast or bacteria and other microorganisms in food, resulting in the food becoming more acid and easy to digest
fortify	to increase the nutritional value of a food by adding nutrients
goitre	a large swelling of a gland in the neck
hunger	feeling the lack of sufficient suitable foods
hygiene	clean or healthy practices
malnutrition/malnourished	condition caused by a lack of the nutrients required for a healthy diet
minerals	chemicals the body needs in small amounts to produce blood, use nutrients and build bones and teeth
NGOs	non-governmental organisations which are managed independently of government
nutritious	food which contains nutrients required for a healthy diet
offal	the edible, internal organs of an animal such as the heart, liver and kidneys
ownership	when local people take control and accept responsibility for issues that affect their own development
participants	people taking part in any kind of activity
participation	involvement of people in the decisions and processes that affect their lives
poverty	a situation where there are not enough resources to maintain an adequate standard of life
protein	type of food found in meat, offal, fish, eggs and pulses which is used for body building and repair
pulses	a family of plants producing seeds in pods which are of high nutritional value and includes peas, beans, mung beans and lentils (also known as legumes)
relish	a side dish of tasty or spicy food which is eaten with the staple food to add flavour and nutritional value
staple food	the main food eaten and the main source of energy in the diet
taboos	certain behaviour which is forbidden or which goes against accepted practice within a society
trainer	a person who guides or teaches others to carry out certain skills or activities, usually in an informal way
vitamins	substances needed in very small amounts to help fight infection and repair the body

Further information

This guide is one of series published by Tearfund.

Others in the series include:

- *Building the capacity of local groups*
- *Improving food security*
- *Credit and loans for small businesses*
- *Agroforestry*
- *Preparing for disaster*
- *Mobilising the community*

All are available in English and most are available in French, Spanish and Portuguese.

Further details, order forms and sample pages from these guides are available on the Tearfund international website: www.tilz.info

For organisations wishing to translate these materials into other languages, a CD-ROM with design files and layout is available.

For organisations planning workshops to train people to either use or translate PILLARS materials, a workbook is also available.

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