
Learning about nutrition
A facilitator's guide for food security & livelihoods field agents

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Learning about nutrition

A facilitator's guide for food security & livelihoods field agents

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Contents

Introduction

Purpose of the guide

Learning about nutrition focuses on the integration of nutrition, food security and livelihoods programming. Its purpose is to build the capacity and facilitation skills of project staff, field agents, and government and non-government organisations working in **livelihood** and **food security** programs and to create an enabling environment for improved nutrition among community members.

While the guide has been developed specifically for use in Myanmar, by adjusting examples and discussion points to the local context it can be adapted to any area where food security and livelihood programmes are looking to improve nutrition.

Development of the toolkit

This toolkit was developed thanks to the multi-donor trust fund, Livelihoods and Food Security Trust (LIFT), which recognises that integrating nutrition into LIFT food security and livelihood programming can maximise programme impact. The Leveraging Essential Nutrition Actions to Reduce Malnutrition (LEARN) project was born in an effort to address the need for technical assistance in nutrition to implementing partners (IPs). The goal of the LEARN project is to increase the capacity of LIFT IPs to deliver a more comprehensive approach to food security that includes all three food security pillars: availability, access and use. The LEARN project achieves this goal through three aims:

1. To increase the capacity of LIFT IPs to deliver nutrition-related activities in their target communities.
2. To integrate nutrition into current and forthcoming LIFT-funded food security and livelihood programmes.
3. To support IPs in collecting data related to nutrition and to contribute to the evidence base in LIFT project areas.

Guiding principles for these learning activities

These teaching and learning materials are based on a horizontal approach: collaborative learning where every participant can serve both as a learner and a teacher. In this context, learning is understood as a process of acquiring useful knowledge needed to make decisions that improve and promote health and well-being. These activities are designed to affirm local knowledge and skills while challenging any misconceptions or harmful taboos which may arise during the training sessions.

These materials have been designed with three assumptions in mind:

1. Not all participants may be literate or confident in their reading and writing skills: activities place emphasis on oral and visual processes such as dialogue, story-telling, role playing and drawing.
2. Each session is not a blueprint to follow, but rather a collection of ideas and suggestions which may be adapted. Facilitators should be flexible in their approach and response to participants' existing knowledge and skills.
3. Facilitators should have experience in or be willing to practice a **participatory learning** process. Although people have different knowledge and skills, together we can learn and work towards the well-being of all.

The nutrition-sensitive approach

Why is nutrition important?

Malnutrition is one of the most important public health problems in developing countries. Limited access to food and nutrients, inadequate care of mothers and children, poor health services, and unhealthy environments are common determinants of malnutrition. There is strong evidence that reducing malnutrition in children and adults goes beyond health outcomes and results in worker productivity gains and increased educational achievement.[1] Reducing malnutrition is a powerful lever for achieving the Millennium Development Goals (MDGs) and breaking interrelated cycles of poverty, malnutrition, and ill health.

The first 1000 days of a child's life – counted from the start of a woman's pregnancy until the child's second birthday – represent a window of opportunity for nutrition. A child's brain and body develop rapidly during this time. Damage done during the first two years is largely irreversible and has a devastating impact on the child's future potential, even if a child's nutrition status improves after the age of two.[2] [3] When malnourished children reach adulthood, they are likely to earn 20% less than their well-nourished counterparts.[4] The first 1000 days are therefore crucial.

Malnutrition in Myanmar

The impacts of malnutrition in Myanmar are seen at individual, household, community and national levels. The high rates of under-nutrition in Myanmar are the consequence of chronic food and livelihood insecurity, under-investment in rural development, poor health and public infrastructure, poor hygiene, inadequate care practices, remoteness and extreme weather events. The situation is compounded in border areas by conflict and complex issues surrounding minority ethnic groups. These conditions limit the ability of many households to access sufficient levels of nutritious food and income as well as to access basic services such as clean water, health and education.

In addition, food production in Myanmar has focused mainly on grain with limited emphasis on production of non-cereal crops such as legumes, vegetables fruits and animal food sources including fish, poultry and livestock. This has led to limited food group diversity and cereal-based consumption patterns. As a result, the diets of most people, particularly the poor, fail to provide all the essential nutrients required for eating well. Vitamin and mineral deficiencies, such as lack of iodine, vitamin A, iron, and vitamin B1 are prevalent in the country.

Studies on the nutrition and food security situation in Myanmar reveal that although there is enough food at the national level it is not always accessible at the household and individual levels. Low income and poor nutritional knowledge and practices are partly responsible for this. Malnutrition is a complex problem and has many interrelated causes.

Integrating nutrition

Due to the impact of nutrition on development, there is a global movement to encourage programmes to be nutrition-sensitive. Nutrition-sensitive approaches incorporate specific nutrition goals and actions in order to address the underlying causes of malnutrition. Nutrition, food security and livelihoods programs are particularly well suited to be nutrition-sensitive, as food security and nutrition security are linked. Successful integration can create synergies which can make interventions more comprehensive.

Nutrition-sensitive approaches can be integrated into a variety of programme areas: agriculture and food security; social safety nets, early child development, maternal mental health, women's empowerment, child protection, schooling, health and family planning services and water, sanitation, and hygiene.

1 UNSCN (2003)
2 Thousand days website (2015)
3 Save the Children (2013)
4 Hoddinott (2012)

Ways to integrate nutrition

There are various opportunities to integrate nutrition into food security and livelihoods interventions. These are some examples of what implementing partners can do:

- Incorporate basic nutrition, health and hygiene education including cooking demonstrations into programs.
- Target households with pregnant and lactating women and children less than two years old, since they are the most vulnerable to malnutrition.
- Increase the range, production and consumption of nutritious varieties of local foods by establishing home and/or school gardens.
- Encourage consumption of a wide range of nutritious foods which are produced or collected from forests, rivers, seas, mangroves and other wild areas.
- Improve market access for smallholders to grow and sell nutritious foods.
- Improve food processing, preservation and storage to allow for access to nutritious foods year-round.
- Manage natural resources to improve agricultural productivity through soil, water and biodiversity conservation to make a wider range of diverse foods available to communities.
- Provide time and labour saving solutions for agricultural tasks to allow more time for childcare commitments.
- Introduce bio-fortified crops into agricultural research and programmes that disseminate this technology.
- Promote consumption of animal products in livestock and fisheries interventions, particularly among pregnant and lactating women and 6 to 23 month-old children.

- Implement safety net and social protection mechanisms that support and protect nutrition outcomes, such as:
  - fresh food vouchers
  - cash transfers that are conditional on the use of health or nutrition services
  - cash transfer amounts that are based on the cost of a nutritious diet[5]

Avoiding negative consequences

It is important to keep in mind that nutrition-sensitive programming is not only about integrating nutrition-related activities into programming, but also making sure that development projects do not unintentionally result in negative nutrition consequences.

Avoiding unintended negative consequences is known as the “Do No Harm” principle. These are some guidelines[6] to help reduce the risk of negative consequences when integrating nutrition:

- Avoid increasing female participants’ workload. Encourage less labour-intense activities for pregnant and breastfeeding women so that they can ensure that their family has a nutritious diet and children are cared for in the best way. Women between the fourth and ninth month of pregnancy should not be doing heavy physical work.
- Make sure that the timing of your project does not compete with other important seasonal activities. Consult with project beneficiaries to make sure you avoid scheduling activities at times of year and day when they are busy.
- Avoid activities which may encourage child labour.
- Make sure that farmers know the risks of using certain agricultural chemicals and train them on ways to reduce the risks or use alternative methods.

5 European Commission (2011), FAO (2013), Le Cuziat and Mattinen (2011) and Alderman et al. (2013)
6 Adapted from Le Cuziat and Mattinen (2011)

- Provide basic hygiene training to livestock keepers to avoid the spread of diseases from animals to humans.
- Provide training on nutrition, especially regarding infant and young child feeding. Ensure that the promotion of livestock products such as animal milk does not replace breast milk for babies under two years old.
- Avoid promoting unhealthy food. Always provide healthy snacks and drinks at meetings and trainings in the community.

For more information on the "Do No Harm" principle and how to design nutrition-sensitive food security and livelihoods projects, please refer to the Action Contre la Faim guide linked in the bibliography.[7]

[7] Le Cuziat and Mattinen (2011)

How to use this guide

This guide is for field agents who want to integrate nutrition into their food security and livelihoods programmes. Participatory learning programmes tend to be more successful when they target established community groups with common interests, such as:

- livelihoods intervention groups
- Cash For Work (CFW) groups
- agriculture and farmer field school groups
- aquaculture and fisheries groups
- savings and loan groups
- women's support groups
- school teachers and parent teacher associations
- Village Development Committees (VDCs)
- other groups working in communities

Topics

The guide is divided into four nutrition topics:

Topic 1	Nutrition basics
Topic 2	Family nutrition
Topic 3	Access to nutritious food
Topic 4	Safe and nutritious food preparation

Topic 1 must be covered before all other sessions. Topic 1 provides a foundation to the remainder of the topics that will be covered. Facilitators can then choose and adapt the sessions from the other topics which they feel are relevant to the needs of the participants and relate to their own programmes.

Sessions, backgrounds and activities

Topics are divided into sessions, each relating to a different theme. Each session begins with a background section and ends with one or more activities. Words highlighted like this can be found in the glossary.

The background sections provide information for the facilitator to read before sessions begin. They prepare the facilitator for each session.

After each background section there are one or more activities for the facilitator to carry out with participants. Activity descriptions begin with a summary of:

purpose	what the activity is intended to achieve
time	how long the activity will take (please note that lessons are designed for 8 to 15 participants. If you have more participants you will need to increase the time allocated to an activity).
materials	what things are required for the activity

Instructions for each activity are then described as a series of steps beginning with an introduction. The activities are designed for groups of 8 to 15 participants and time estimates for the whole activity and for each step are given.

It is critically important that the facilitator read through an entire learning activity before carrying it out. This allows the facilitator to clearly understand the purpose and procedure of the activity. The facilitator should prepare in advance for lessons and activities.

Participatory learning approach

This guide takes a participatory learning approach to Community-based adult learning. Community-based adult learning is a style of learning for adults which is based in communities rather than in a formal educational institution such as a school, college or university. Participatory learning centres on the needs and experiences of participants and has been shown to be effective for community-based adult learning.

Participants

Participants take part in a participatory learning process. They may be men, women and children of different ages. They may have diverse levels of education, literacy, cultural or religious beliefs. Individuals learn in different ways. The design of the programme must take these differences into account.

Facilitators

In order to be effective, a participatory learning session must assist, guide and support participants while they learn, reflect and act. The adult learning model is shown in Figure 0.1.

Facilitators lead the learning process. They are not teachers or experts who are delivering information. Their role is to help the learners to learn. They should make sure that participants understand the correct key messages from each session, find out what is preventing participants from changing behaviour and alert participants to harmful beliefs and practices, if appropriate.

Figure 0.1 The cycle of facilitation

Designing participatory learning programmes

When designing a participatory learning programme facilitators must find out as much as possible about the needs and experience of their participants and adapt the programme to them. The process of learning is as important as the content. How we learn is as important as what we learn.

The following guidelines can help when designing a participatory learning programme:

Adults learn best when...	So facilitators should...
they are involved in setting learning goals, content and activities	design the programme with the participants make sure that everyone is clear about the goals for the education programme and what outcomes they should expect
they trust one another and are respected	develop a trusting, respectful learning environment dress and behave appropriately
they feel relaxed about experimenting, making mistakes, and taking risks	create an atmosphere that is supportive and comfortable for learning make the activities stimulating and enjoyable provide a lot of opportunities for practice and allow people to learn from their mistakes
the lesson content is relevant to their needs and daily lives	use real life situations and realistic examples and problems in the programme
they are actively involved in the learning process (learning by doing)	include activities which require active participation by the learner involving their ideas, attitudes, feelings, and senses
their own personal learning style is accommodated	adapt the education programme to the characteristics, literacy level, environment and needs of the participants use a range of different facilitation techniques try to create an atmosphere of respect and understanding for the participants
their own experiences and knowledge are included in the programme	discourage the participants from seeing the facilitator as an expert encourage the participants to share their own knowledge and experiences and build on this by adding extra information and skills which they need

Table 0.1 Guidelines for designing a participatory learning programme

Learning methods

Activities in this guide use many different learning methods. The methods fall into four categories, called facilitator actions, participant actions, discussion and reflection. Below is an introduction to these categories and the learning methods contained in them.

Participant actions

Participant actions form the central part of each activity. They are designed to get participants to learn by doing, giving preference to learning by listening, and to aid interaction and information exchange between participants. As facilitator, it is your role to help this process, and step in to guide participants where necessary. Learning methods used in participant actions are listed below:

Introduction and trust-building

At the start of a session facilitators must make sure that participants feel comfortable and relaxed. It is important to develop a feeling of trust and cooperation between all of the participants and yourself. You can use introductory exercises, trust-building exercises and ice-breakers to do this. Examples are given in **Appendix 1**.

Group exercise

Group exercises can involve problem solving activities, discussions or practical work. Groups are good because they help shy participants have the confidence to try techniques and put forward views. Often they would be too shy to do this in front of all the participants.

Make sure that assertive individuals are not dominating the group work and that passive participants get involved.

When designing an adult learning programme try to plan to schedule a group exercise or practical activity after lunch so that participants do not begin to fall asleep!

Participant presentation

After certain group exercises or other activity steps, you can ask the one member of the group to present to everyone. Encourage their ideas by writing them on the flip chart, and encourage the other participants to ask questions. When you ask groups to present, make sure that the same people do not present each time.

Brainstorming

Participants give ideas on a particular topic such as “what ways can we use to promote better nutrition in our community?” Encourage them to give any idea which comes to them. Write every idea on the flip chart. Consider no idea incorrect or unrealistic. This type of activity makes participants feel confident and trusted. Afterwards select a few of the ideas for further discussion.

Game

These are entertaining ways to help put ideas across. They get participants to think about issues and problems while having fun. Games may use picture cards, food cards or other props.

Role play

Role plays consist of participants acting out different parts in a story. These methods can help participants explore issues and problems. This can help participants see things from other people’s point of view. Participants can be asked to read a script which is developed by the facilitator to help them discuss a problem. Groups can also be asked to develop their own plays on a particular topic.

Storytelling

This is an opportunity to present a story which you have developed before the session of someone who shows correct or incorrect behaviour. After the story, ask the participants questions about what happened in the story and discuss their responses to ensure that the correct information is given.

Agree or disagree

These statements about a topic, with which participants have to either agree with or disagree, are useful in presenting information, stimulating discussion and correcting misconceptions about topics.

Competition

Help participants to revise and consolidate information in an enjoyable way. Get them to compete in teams to answer questions about a topic or demonstrate a skill.

Energiser

Participants' energy levels often begin to run low especially after long presentations or after lunch. If participants are looking tired or are keeping quiet it could be time to introduce an energiser. These are short, one-or-two minute, fun activities to get all of the participants to stretch, move around, laugh and regain some of their energy. You

can make up your own energisers (such as getting participants to sing a song, do a dance or perform silly actions) or ask participants if they know any energisers which they would like to perform. There are examples of energisers in **Appendix 1**.

Facilitator actions

These methods are led by the facilitator. This is necessary for introducing new ideas to the participants, but remember that the ideal situation is for participants to learn from each other, so try to keep the facilitator's part short and involve the participants by discussing with them and using them to play parts in demonstrations. Learning methods used in facilitator actions are listed below:

Facilitator presentation

Use these at the beginning of activities to introduce a topic. They should be as brief as possible and no longer than 15 minutes.

Demonstration

Showing participants how to do something is more effective than trying to describe how to do something. This method is useful for helping participants learn about practical techniques.

Visual aids

Pictures help people remember concepts more effectively. They are very useful for expressing technical information. For groups with low literacy levels, summarising information in the form of a diagram or picture is important and visuals should be used whenever possible. Pictures can be used to show problems or good examples that participants can then discuss.

Visual aids accompany this guide. You can print from the guide pdf or draw pictures presented in this guide for participants.

Discussion

Discussion is an important part of almost all of these learning techniques, especially group exercises and presentations. It is the foundation of information exchange in the sessions and you will often see it in activities. Try to encourage discussion by asking a lot of questions, including whether the participants agree or disagree with what is being said and why.

Reflection

At the end of every session hold a discussion with the participants to reflect on the learning process. They should say what they have learnt and should identify ways in which they can use the information to help them change their behaviour and practices for the better. The last part of each reflection step is always to review the key messages.

Key messages

This is the last part of the reflection step. Ask participants what they can remember about the session to reinforce some of the most important parts of the lesson. This is also a good time for you to correct misconceptions or incorrect information.

Topic 1

Purpose

To enable participants to understand the basic principles of nutrition

Nutrition basics

Topic overview

Notes to facilitator

This topic is the foundation of the facilitation guide and must be covered before continuing to any of the other topics.

- The introduction and background sections are for you to read before the session. The activities describe what you can do with participants during the session.
- The activities are just a guide. You should adapt them to meet the needs and literacy level, cultural requirements and environment of the participants in your area.
- Use energisers if participants seem to be getting tired. Examples also found in **Appendix 1**.
- Use introductory exercises, ice breakers and trust building exercises to help participants to get to know one another. You can find examples in **Appendix 1**.
- If any participants are not able to read or write easily then use pictures as much as possible.
- Try to avoid talking too much. Keep the activities fun and active.
- Correct any incorrect opinions or information given by the participants.
- At the end of the activity reflect with the participants on what you have learnt together and review the key messages.

Introduction

Good nutrition is the foundation of good health. Healthy people form successful and productive families, communities and societies. Well-nourished children grow and develop properly. They get sick less often and are healthy. They achieve more at school, earn more as adults and live longer. They also are more likely to have healthy children.

The effects of malnutrition

Globally, **under-nutrition** is the one of the main causes of death in children under five years old.[8] In Myanmar one in three children has poor growth and development as a result of under-nutrition.[9] Undernourished children suffer from more diseases and are not able to perform well at school. They become less successful adults and are likely to have fewer employment opportunities meaning that they earn less money than individuals who were well-nourished as children.

Undernourished women are much more likely to give birth to underweight babies which perpetuates the cycle of poor nutrition in a community. They are also more likely to have difficult births. Under-nutrition can cause economic loss not just to individuals but to households and whole communities.

The first 1000 days

The first 1000 days of a person's life is measured from conception to two years old. It is the most important time for good nutrition. Under-nutrition at this time can lead to problems which cannot be reversed. Because good nutrition is necessary before babies are born it is important that women have a **balanced diet**. Healthy mothers produce healthy babies.

8 Black et al. (2013)
7 Adapted from Le Cuziat and Mattinen (2011)

In order to understand under-nutrition we need to look at its causes and consequences. This topic will introduce participants to the causes and consequences of under-nutrition.

They will learn about and discuss:

- ... nutrients, food groups and how to achieve a balanced diet
- ... the main signs and symptoms of under-nutrition
- ... how the effects of having an adequate or poor diet can be passed down from mothers to children

Session 1.1

Why should we care about nutrition?

Background 1.1

The causes and consequences of malnutrition

We should care about nutrition because it affects our families, our communities and us as individuals. **Malnutrition** is the result of not getting the right kind of nutrients for the needs of our body. It can lead to health problems, education problems, lack of employment opportunities and lower incomes. **Figure 1.1** summarises some of the consequences of malnutrition in children and adults.

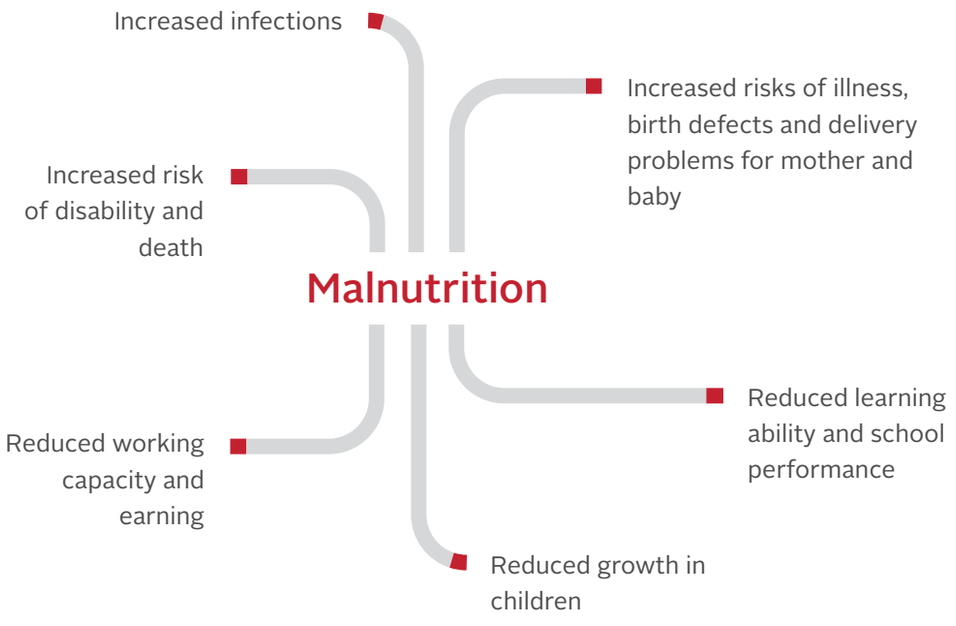


Figure 1.1 Some consequences of poor nutrition

The causes of malnutrition

Malnutrition has different levels of causality. Immediate causes are at the individual level. Underlying causes happen at household or community level and influence immediate causes. In turn, basic causes happen at community or national level and influence underlying causes. Figure 1.2 shows these causes and relationships.

Immediate causes of malnutrition

Poor diets do not contain enough of the right foods and nutrients. Poor diets and disease are direct causes of malnutrition for women, children and men. Children may have a poor diet because they are not breastfed properly as babies. It may also be a result of a diet that lacks variety or insufficient food intake. As children grow the frequency and size of meals must increase to ensure proper growth and development.

Disease can lead to malnutrition because illnesses can reduce appetite and the body's ability to absorb nutrients. Illness may also cause the body to lose nutrients through diarrhoea and vomiting or to use up nutrients more quickly.

Poor diet and disease are linked because if a person has a poor diet they are more likely to become ill. When a person is ill their body may not be able to take in or use food properly, which can lead to malnutrition.

Underlying causes of malnutrition

Factors which happen at an individual, household, family or community level cause poor diet and disease. Food insecurity may be linked to problems of food availability, of food access and of food use.

Family members may experience a food shortfall due to lack of money or inadequate storage and preservation methods which result in food spoilage. They may make poor choices about what to eat and what types of food to buy. They may not have access to markets to sell

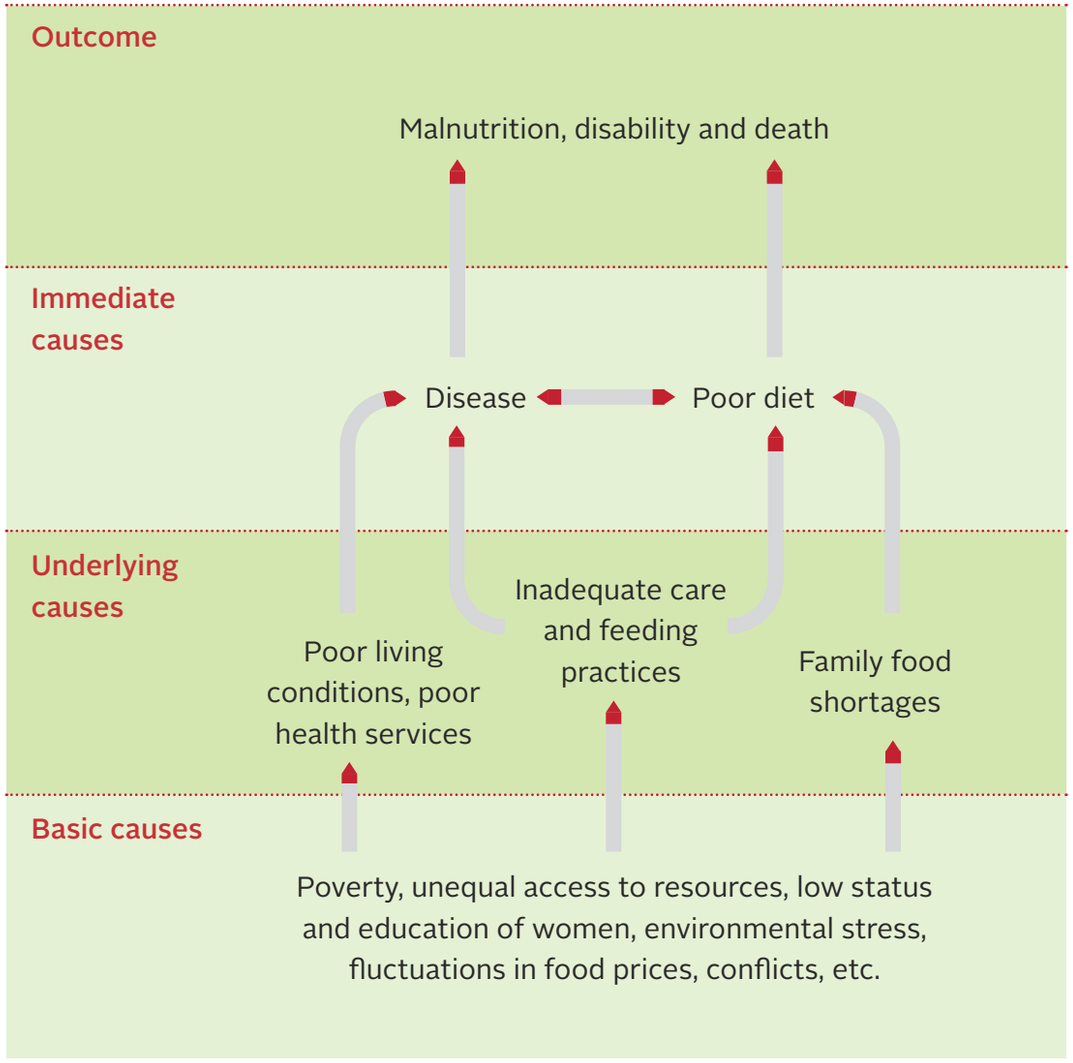


Figure 1.2 Immediate, underlying and basic causes of under-nutrition in a community[10]

[10] Adapted from Burgess and Glasauer (2004) and UNICEF (2012)

or purchase foods, or have market disruptions. They may have lost productive assets such as crops or livestock. Shocks, hazards, trends or other seasonal factors can also contribute.

Caregivers may not have the knowledge, money or time to care for themselves or other family members properly. This may result in inadequate care and feeding practices.

Poor living conditions due to overcrowding, as well as lack of access to clean water, sanitation and health services, can lead to serious health problems.

Basic causes of malnutrition

Basic causes of malnutrition occur at the community or national level. They include poverty, lack of employment, rising food prices and unequal distribution of land, water, housing or other resources. The low social status and education level of women is a basic cause.

Other factors include overpopulation, environmental damage, climate change, political unrest and discrimination, as well as insufficient health and education services.

Supporting women's role in nutrition

In most families, women are responsible for childcare, food production, food purchases and food preparation. It is important to keep this in mind, because adding to a mother's already heavy workload may impact on the nutrition of the whole family.

It can have a negative impact on family nutrition if women are not able to choose what food can be grown or bought or how the family can be fed. If women are not educated and valued in their family or community they may not be able to make good choices about feeding themselves or their families. Men must acknowledge this important role and they must support women by sharing the workload and helping to provide nutritious food for the family.

Activity 1.1

Malnutrition problem tree[11]

Purpose

to enable the participants to:

- develop a better understanding of the main causes of malnutrition and how they are related
- identify some of the consequences of malnutrition

Time

1 hr 10 mins

Materials

- flip chart
- permanent pens (various colours)
- tape
- blank pieces of paper in two different colours (about 20 pieces of each colour per group) or Post-It notes

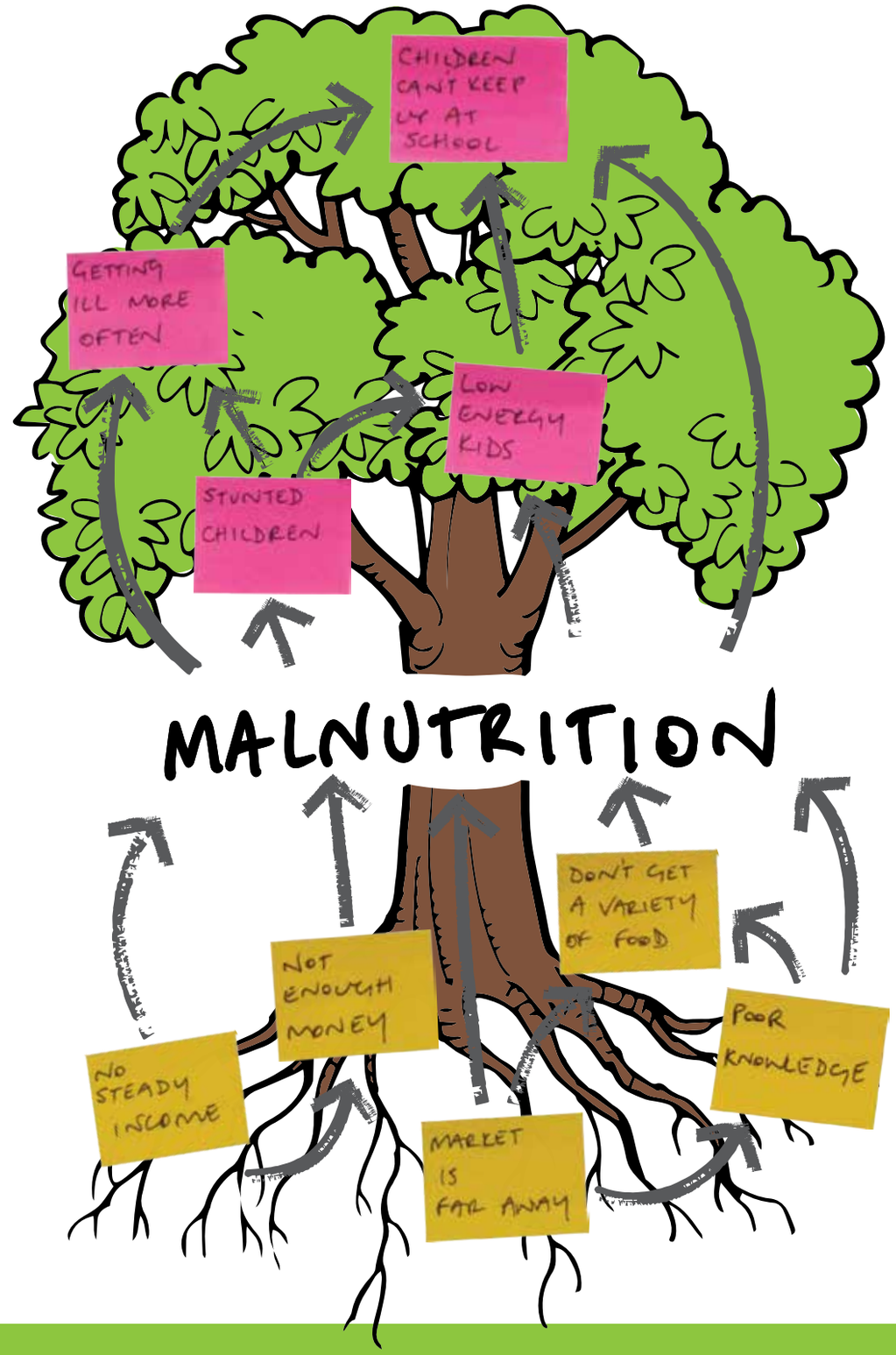


Figure 1.4
Example of how to develop the problem tree

[11] Helen Keller International and Save the Children, USA (2010)

Instructions

Step 1 — Participant action

Malnutrition Tree — 15 mins

1. Ask the participants what they think the term “malnutrition” means. Write their answers on the flip chart. They may come up with a definition such as “malnutrition is the result of not getting enough of the right type of food to keep the body strong and healthy”. Note that malnutrition is a complex problem and has many causes and consequences.
2. Explain that the aim of this activity is for each group to produce a diagram in the shape of a tree which will show the causes and consequences of a problem. The problem which we are going to look at is malnutrition in their community.
3. Divide the participants into small groups. Give each group a flip chart page and some markers.
4. Ask each group to draw a simple picture of a tree and to write “malnutrition” over the trunk. Encourage them to fill the whole flip chart page with their picture. Show them an example by drawing a large, simple outline of a tree on your own page. Allow 10 minutes.
5. Ask participants to look at their trees and discuss:
   - What makes trees strong? How do they become strong?
   - Which parts of a tree do we see and which parts are invisible?
   - How and why are the roots of a tree important? What do they do?
6. Point out that there are different factors that contribute to a tree’s growth and strength, such as water, sun, air and nutrients in the soil.

Step 2 — Participant action

Causes and consequences of malnutrition — 35 mins

1. Explain that this session is about identifying and explaining the different causes and consequences of malnutrition. There are usually several reasons why a person does not get enough of the right type of food and becomes malnourished. Asking why will help us to identify the reasons.
2. Show the participants an example of the relationship between malnutrition and one of its causes on the flip chart. Write the word “malnutrition” in the middle of the flip chart page and beneath it write “lack of food” and draw an arrow to the word malnutrition. Hand out small pieces of paper or Post-It notes in two different colours. Give 20 pieces of each colour to each group. Ask the groups discuss the causes of malnutrition in their community and write each cause down on a separate piece of small paper or post-it of one colour. Emphasise that they should write one cause per piece of paper and put these on the roots of their tree drawing.
3. Explain that they should write as many causes as they can think of or have time for and they should discuss how to arrange the causes.
4. Once the participants have agreed on the positioning of the pieces of paper they can stick them down with the tape. They can show the relationships between the causes by joining the pieces of paper with arrows as show in Figure 1.4. Allow 20 minutes.
5. Repeat the same exercise for the consequences of malnutrition in their community by using pieces of paper of a different colour and sticking these at the branches level of the tree. Go from group to group and assist where necessary. Allow 10 minutes.
6. Ask all groups to display their pictures and ask participants to walk around and look at them all.

Step 3 — Discussion

Malnutrition in the participants' community

10 mins

1. Discuss the pictures and ask the participants to explain about malnutrition in their own community. Use some of these questions to help you:
   - What causes of malnutrition are in more than one of the drawings?
   - What makes an environment unhealthy? Why is there a lack of sanitation? Is it due to other priorities, no means to provide sanitation, a lack of information, or anything else?
   - Why is there environmental degradation? Is it due to population pressures, poor farming methods, flooding, or other reasons?
   - What are the possible reasons for inadequate childcare and feeding practices? Do mothers have too much work? Do mothers lack knowledge about nutrition? Are there other reasons?
2. Explain that when a person or child is malnourished there are usually numerous reasons. Often the reasons are connected. For example, the father may blame the mother for not feeding the child enough, but the father is not giving the mother enough food or enough variety of foods to cook for the child. Maybe he does not give her enough variety because he cannot afford to buy it, or because he doesn't have enough land.
3. It is important to do a proper analysis and not blame one person. In most cases the solution to one person's malnutrition will involve the whole household or community.

Step 4 — Reflection

Reflect on the learning process

10 mins

1. Ask the participants what they have learnt from the activity.
2. Discuss why it is useful to identify the causes of malnutrition in the community. Explain that in future sessions you will be looking at ways to address some of these problems.

Key Messages

- Malnutrition has many causes and these causes relate to each other.
- Illness can cause malnutrition and malnutrition can cause illness.
- Food shortages, improper feeding practices and poor living conditions can lead to a poor diet and illness.
- The basic causes of malnutrition can include poverty, poor access to resources, environmental stress and other factors at community or national level.
- Both men and women play an important role in making sure that a family is well-nourished. If men or women have low status or are not well educated this can have serious impacts on family nutrition.
- The consequences of malnutrition include health problems, learning disabilities, and lower incomes later in life. You can copy Figure 1.1 onto the flip chart to help summarise the consequences of malnutrition.

Session 1.2

Nutrients and the food groups

Background 1.2

The functions of nutrients and food groups

Food contains nutrients - substances which the body uses for growing and functioning. We need many different nutrients in order to stay healthy, to have energy and to grow. Food contains various nutrients in different amounts.

The nutrients

Nutrients can be divided according to the job that they do:

- **Vitamins and minerals** help the body to function properly. Each vitamin and mineral plays a specific role in strengthening the body and protecting it from disease.
- Carbohydrates provide energy for the body to function, move and work as well as giving us warmth. Excess carbohydrates that are not used by the body can be turned into fat, which is stored by the body.
- Fats provide concentrated sources of energy and substances needed for health and growth. They also help with the absorption of some vitamins such as **Vitamin A**. Excess fats that are not used by the body will be stored by the body.
- Proteins help to build the structure of the body, including muscles, and the immune system.

In addition to the nutrients mentioned above the following substances contained in food are important for our good health:

- Fibre absorbs harmful chemicals, slows digestion and improves the absorption of nutrients from food. It helps to lower cholesterol and prevent obesity.
- Water is the base for bodily fluids, such as blood, digestive fluids and urine, and helps the chemical processes in the body to occur.

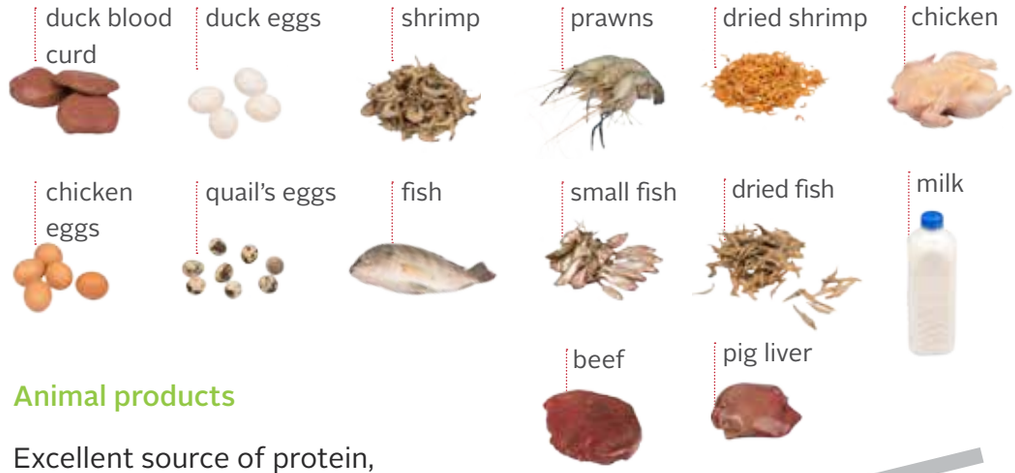
The food groups

All food contains a mixture of nutrients. It is useful to group foods by the highest levels of nutrients contained in them. These **food groups** help us choose the most nutritious kinds of food to eat. In Myanmar we classify food into three groups which are shown in **Figure 1.5**.

Body-building foods

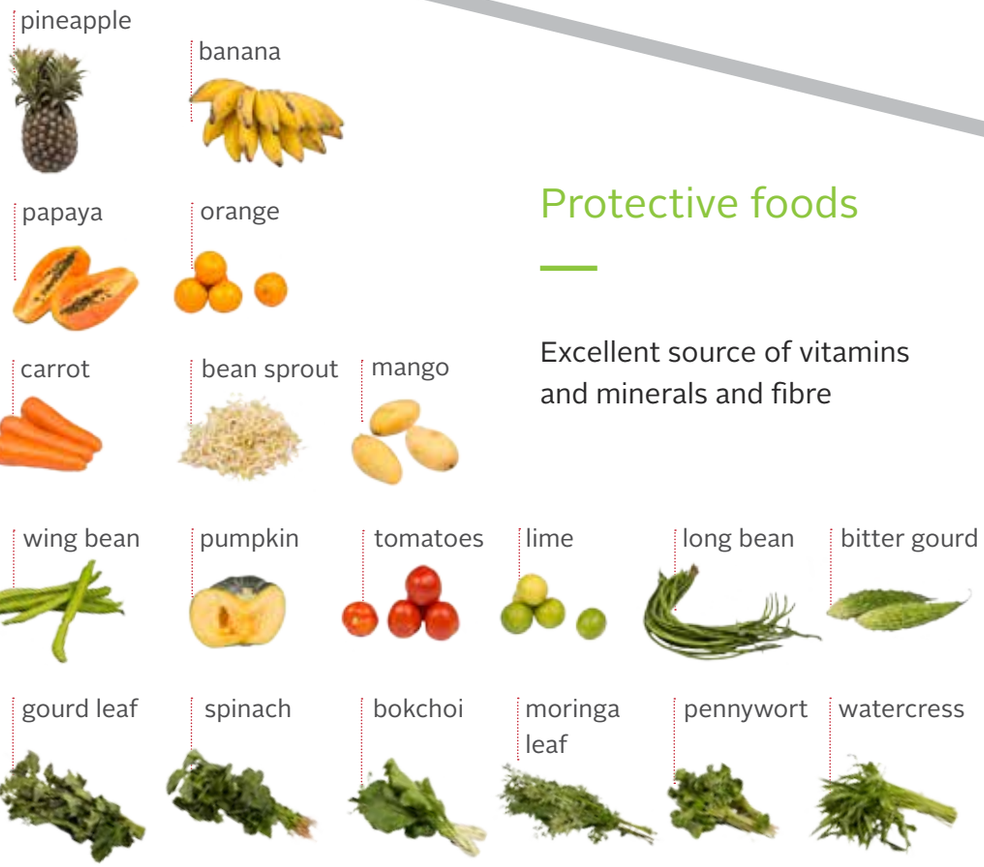
Legumes, nuts and oilseeds

Good source of protein, some vitamins and minerals and fibre and oils



Animal products

Excellent source of protein, vitamins and minerals, fats and oils



Protective foods

Excellent source of vitamins and minerals and fibre

Energy-giving foods

Good source of energy, protein, and some vitamins and minerals. Unrefined cereals are also a good source of fibre

Figure 1.5 / Visual aid 1.1 The food groups

Activity 1.2

The food group game

Purpose

to enable the participants to identify foods from each major food group

Time

45 mins

Materials

- flip chart
- permanent pens (various colours)
- tape
- about 60 small pieces of paper (two or more per participant)
- a flip chart page with the main nutrient groups drawn on it
- Visual aid 1.1

Adapt this session to what the participants already know. It they have heard of proteins, carbohydrates, fats, vitamins and minerals, then you can talk about these, including their functions and sources, as discussed in the background to this session. If not then just use the three food groups when talking about the functions of food.

Instructions

Step 1	Facilitator action
Nutrients and the food groups	15 mins

1. Ask the participants why we eat food and get them to explain what they think food does for the body. List their responses.
2. Explain that when thinking about food and how it is used by the body we can use the example of making a fire for cooking. Explain that when we light a fire we need kindling, a match, fuel such as wood, and air. Without all of these things we cannot make a good fire. When the fire has lots of dry wood it burns well and makes good charcoal for cooking on. The more wood that we give to a fire the bigger and hotter it gets. When the fire runs out of wood, it burns down.
3. Explain that our bodies are the same as a fire. We need many things in order to have energy and stay healthy. The food we eat contains important substances called nutrients which help us grow, give us energy and keep us healthy. If we do not get enough food or the right kind of food we can get tired, weak and sick. The fuel for people is the nutrients in the food we eat.
4. Emphasise that in order to stay healthy, to have energy and to grow, we need many different nutrients. Food contains different nutrients in different amounts. We can group foods according to the nutrients contained in them. These food groups help us choose the most nutritious kinds of food to eat.
5. Note that in Myanmar we group food into three food groups: **energy-giving foods**, **body-building foods** and **protective foods**. Be sure to make links between nutrients and malnutrition as discussed in the previous activity.

Step 2 — Participant action

Food group game

20 mins

1. Provide each participant with two or more small pieces of blank paper.
2. Ask them to write down or draw a locally-available ingredient which they usually eat on each piece of paper.
3. Explain that they should not write down foods that include many ingredients, such as mohinga, but they can write the ingredients of mohinga such as noodles and fish paste on separate pieces of paper.
4. Collect all of the pieces of paper and mix them up together in a bowl. Meanwhile write the names of the food groups on three flip chart pages, one per page.
5. Lay the flip chart pages on the floor or on three separate tables and ask each participant to take two small pieces of paper from the bowl.
6. Ask the participants to place each piece of paper into the food group to which it belongs. Let the participants look at the three groups with all the different foods. Ask the rest of the group to say whether the papers have been placed in the correct group.
7. Facilitate a discussion around the food groups; Ask questions such as: Which of these foods do you eat every day to give you energy? Which foods to do you eat for protection? Which foods do you eat to help you grow strong?
8. Then show them Visual aid 1.1 and discuss it. Comment on how the foods are grouped into the three categories. Ask which kinds of food shown on the picture are available in their community. Are they bought, grown or collected from the wild?

Step 3 — Reflection

Reflect on the learning process

10 mins

1. Ask the participants what they have learnt from the activity.
2. Discuss why it is useful to put food into different groups and how this helps people to plan what food to buy or grow and how to make nutritious meals.
3. Ask the participants how they will use this information next time they plan a meal, shop for food or plan what to grow in their gardens.

Key Messages

- The food we eat contains important substances called nutrients which help us grow, give us energy and keep us healthy.
- Food contains different nutrients in different amounts.
- We can group foods according to the nutrients which are contained in them.
- These food groups help us choose the most nutritious kinds of food to eat.
- There are three food groups: the energy-giving food group, the body-building food group and the protective food group.
- The food group system helps us choose the most nutritious kinds of food to eat in order to have a balanced diet.

Session 1.3

What is a balanced diet?

Background 1.3

The components of a balanced diet

A balanced diet contains the right proportions of food from the three different food groups. Not every meal must be balanced but people should try to eat a balanced diet every day. Food contains different nutrients in different amounts, so parents and caregivers must make sure that the family receives as much variety as possible in the diet.

How much should we eat?

How much we should eat depends on how old we are, whether we are male or female and how physically active we are. It also depends on the time in our life, such as whether we are pregnant, breastfeeding or sick.

- Teenagers need a lot more food, in general, than any other group.
- Adult men tend to need slightly more protein and carbohydrates than adult women.
- Women need to eat a higher quantity of nutritious food and to get more rest when they are pregnant or breastfeeding.
- Women of child-bearing age need more iron than other people in the family.
- Children need plenty of all three food groups because they are growing and are physically active.
- Children from 6 up to 23 months should receive breast milk as well as **family foods** which are full of vitamins and minerals.

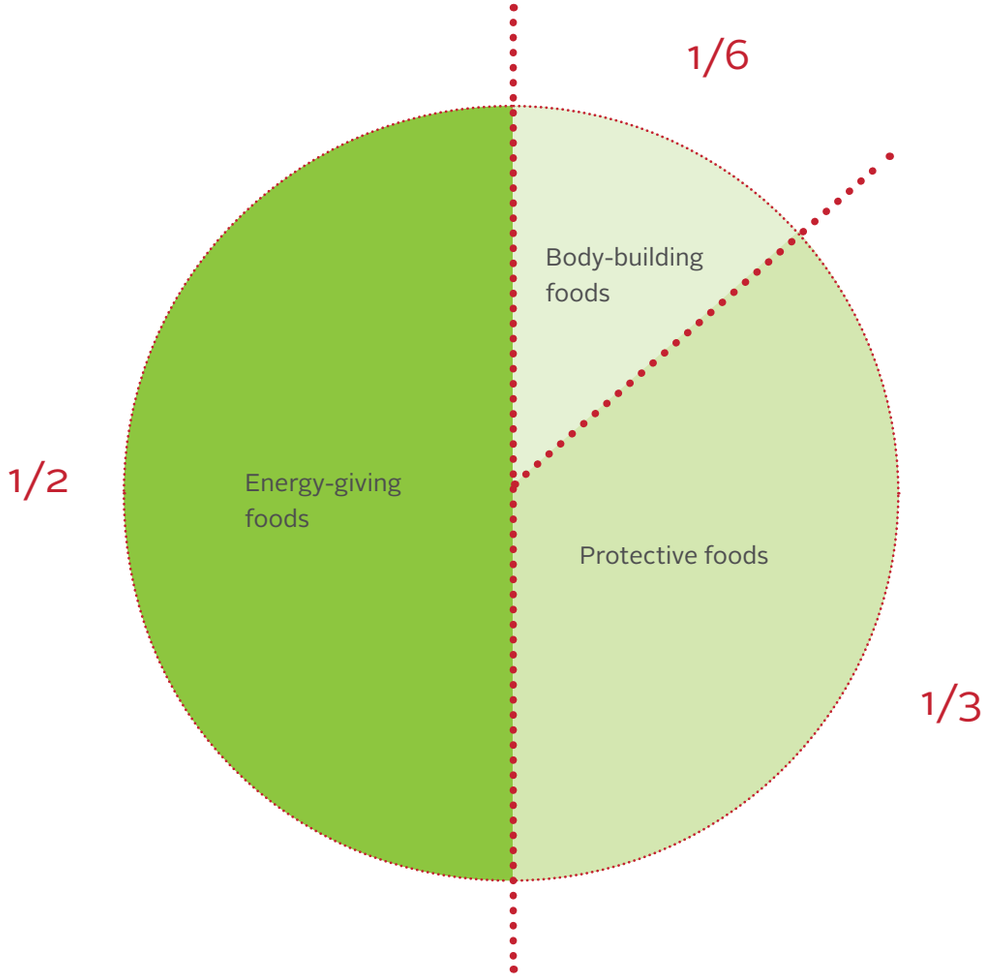
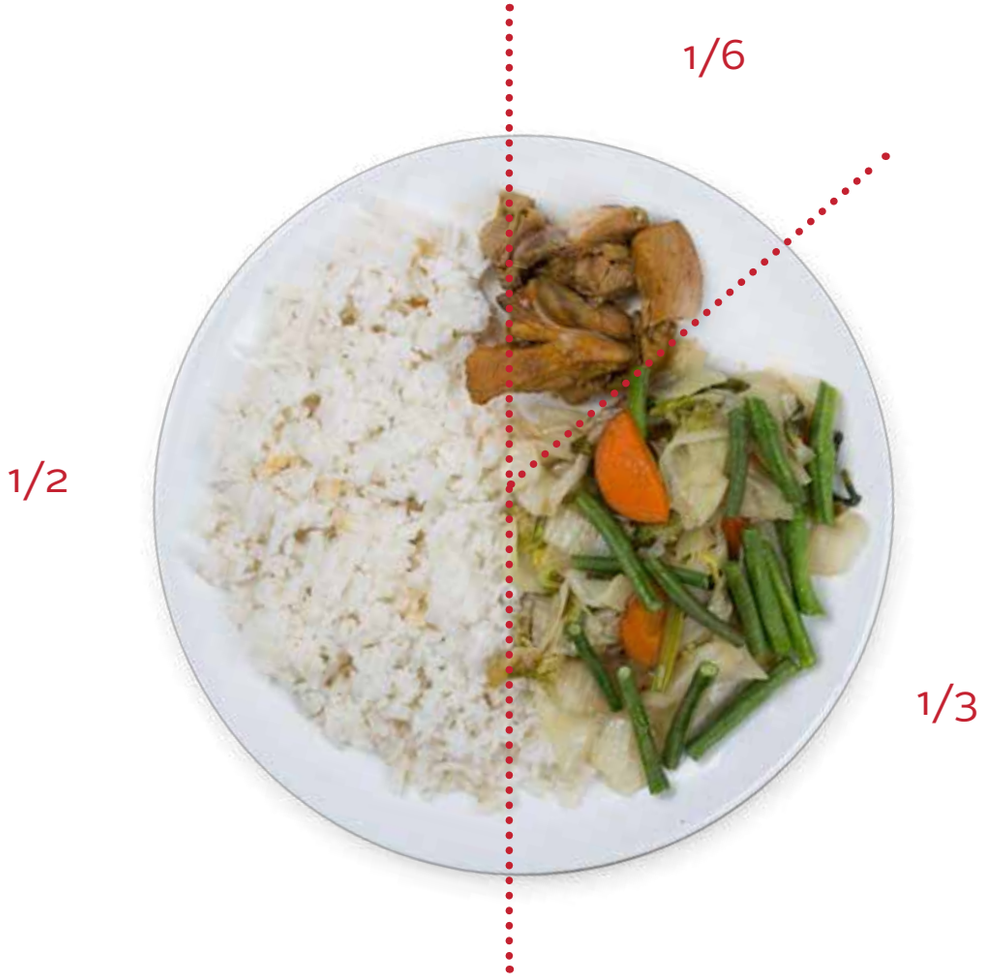


Figure 1.6 The proportions of different food groups in a balanced meal

How often should we eat?

Adults should eat at least three meals per day, but children need to eat more frequently because they have small stomachs but are growing rapidly. At six months children can begin to eat small amounts of food two to three times per day. By the time a child reaches one year, the child should be eating three to four small meals per day with one to two snacks. Children under two years old should also be breastfed.



A balanced meal

About 1/2 of the food in a meal should come from energy-giving foods.

About 1/6 should come from body-building foods.

The remaining 1/3 should be protective foods.

We should focus on eating plenty of body-building foods, protective foods and foods which are high in fibre.

We should not eat too many foods which are fried, salty or contain large amounts of sugar or MSG. These things are not good for our health in large quantities.

Activity 1.3

Planning a balanced meal

Purpose

to enable the participants to understand the principles of a balanced diet and review the three food groups

Time

Adds up to 1hr 10 mins

Materials

- flip chart
- permanent pens
- tape
- pieces of paper with food names that were made by participants in **Activity 1.2** and extra blank small pieces of paper
- prepared flip chart pages (one per group) with a drawing of a plate divided into three sections as in **Figure 1.6**

For the optional energiser:

- a piece of paper for each member of the group, with one of the three food group names written on it

Instructions

Optional — Participant action

Food group energiser — 10 mins

1. Give each participant a piece of paper with the name of a food group written on it so that the first person is energy-giving foods, the second body-building foods, the third protective foods and so on until all participants have a food group name.
2. Ask all of the participants to stand in a circle.
3. Explain the game. You will call out a food such as “fish”, or “mango”, or “watercress”. Participants must decide to which food group this food belongs. All those who belong to the food group of the food that is being called must change places with someone else from the same food group. For example, if the food called out is “guava”, this belongs to the protective food group and all participants who hold pieces of paper labelled “protective foods” will exchange places. Point out that when you call out “nutritious meal” everyone must exchange places.
4. Play the game until everyone has moved a few times.
5. Review the game. Explain that we do not necessarily need to eat all the nutrients in one meal. If we eat a variety of foods in a day, we can get all the nutrients the body needs.

Step 1 — Participant action

Balanced plates — 20 mins

1. Use the pieces of paper with food names or pictures on them that were made by participants in the previous activity.
2. Divide the participants into small groups. Give each group a flip

chart page which has the divided circle of a plate on it, like the one in Figure 1.6 but without the names of the food groups written on it.

3. Explain that the proportions on the flip chart page show the estimated amount of food that you should eat from each of the three food groups in a meal.

4. Give each group some ingredient papers and ask them to try to create healthy meals on their plates by placing the ingredient papers in the correct position. Allow 15 minutes.

5. Note that if they are missing a particular ingredient they can try to trade ingredients with other groups. If they still can't find the ingredient that they need they can make a new one up and write it on the extra piece of paper provided.

Step 2 — Participant action

Group presentation on balanced plates — 10 mins

1. Bring participants together and have each group present their group work. Ask them to explain how they prepared their dishes.

2. After the group has presented ask the other participants if they have any questions about the presentation or any points to add.

Step 3 — Facilitator action

A balanced diet — 10 mins

1. Emphasise that about 1/2 of the meal should be energy-giving foods such as rice or noodles and about 1/6 of the meal should come from body-building foods like meat, fish, and beans. The rest of the meal, about 1/3, should come from protective foods such as vegetables and fruit.

2. Ask what a balanced diet means. Discuss their responses and note that a balanced diet means eating a diverse range of foods in the meals we consume daily. A balanced diet is very important to:

   - ... help children to grow and develop properly
   - ... protect us against diseases by boosting the body's immune system
   - ... give us energy and thinking power
   - ... bring satisfaction, make us happy and prevent hunger

Step 4 — Discussion

How balanced was my plate yesterday? — 10 mins

1. Ask the participants to think about the meals that they ate the previous day and decide whether they think their diet over the day was balanced. Allow three minutes.
2. Ask them to think of some things that would have made it more balanced.
3. Ask for volunteers to talk about what they ate the previous day and how healthy it was.
4. Ask what they had to drink during the day.
5. Ask for suggestions of healthy drinks and unhealthy drinks.

Step 5 — Reflection

Reflect on the learning process — 10 mins

1. Ask the participants what they have learnt from the activity.
2. Discuss why information on a balanced diet can help them to plan nutritious meals for different members of the family.

Key Messages

- We must eat a balanced diet and a varied diet in order to be healthy.
- About 1/2 of the meal should be energy-giving foods such as rice or noodles and about 1/6 of the meal should come from body-building foods like meat, fish, and beans. The rest of the meal, about 1/3, should come from protective foods such as vegetables and fruit.
- We need to ensure that children under five years old and pregnant and breastfeeding women have a nutritious balanced diet.

Session 1.4

Malnutrition signs and symptoms

Background 1.4

How can we tell if someone is undernourished?

Malnutrition can be due to:

- ... a person not getting enough nutrients for growth and maintenance of the body from their diet (under-nutrition)
- ... illness causing the body to become unable to fully use the food which is eaten (under-nutrition)
- ... a person consuming too much food (**over-nutrition**)[12]

Under-nutrition is currently a major problem amongst children under five years old in Myanmar. In urban areas problems of over-nutrition are increasing.

Who is affected by malnutrition?

Children tend to be more commonly and more seriously affected by under-nutrition than adults. They need many nutrients in order to grow and develop, but have small stomachs and so they cannot take in large amounts of food at one time. This is why it is important for children to eat more frequently than adults. One of the most common signs of a malnourished child is that they do not seem to be growing properly either in terms of height or in terms of putting on weight.

Wasting and stunting

Wasting is seen when a child is too thin for his or her height. Poor care practices, disease, and insufficient food intake, which results in

[12] Adapted from UNICEF (2012)

starvation, are the usual causes of wasting. Wasting is a very serious, life threatening condition.

Stunting is seen when a child is too short for his or her age. This usually occurs in children with long-term nutrient deficiencies or long-term illness or both of these. Children who are born with low birth weight are often stunted.

Children who become stunted before birth or during the first two years of their lives will usually remain shorter than others of their age until adulthood. Apart from poor growth, stunted children often have more difficulty learning in school since nutrient deficiencies can slow brain development. Stunted children and adults are also more susceptible to diseases and disabilities than non-stunted people. Stunted people tend to be less productive adults and earn lower incomes than non-stunted adults.

In Myanmar around 7.9% of children under five years old suffer from wasting while 35.1% suffer from stunting. Both conditions are preventable if children under five years old have a nutritious, balanced diet.[13]

[13] Government of Myanmar and UNICEF (2011)

Understanding the signs of malnutrition

It is often hard to see the signs of malnutrition because when everyone in the community is of short stature a small child does not appear to be a problem. However all children all over the world should grow at the same rate up to the age of around five years old. Children who do not grow at this normal rate are likely to be malnourished. Poor growth can indicate other invisible symptoms of malnutrition such as poor brain development, damage to the immune system and eyesight.

Vitamin and mineral deficiencies

Some of the most serious consequences of malnutrition are caused by vitamin or mineral deficiencies. **Appendix 2** outlines the deficiencies which cause the most serious problems in Myanmar, their symptoms and sources of foods which can be used to prevent these deficiencies.

Vitamin or mineral	Function	Examples of food sources
Vitamin A	Important for vision, growth and development, and disease prevention	Eggs, dark green leafy vegetables, pumpkin
Vitamin B1	Important for the nerves	Beans or lentils, bean curd, groundnut, fresh fish
Iron	Important for healthy blood, proper functioning of muscles and the brain	Chicken, dark green leafy vegetables, beans or lentils, bean curd, fresh and dried fish, groundnut, egg
Iodine	Important to prevent goiter and for growth and development	Iodised salt, sea fish, shellfish, seaweed or kelp

Table 1.2 The functions of some important vitamins and minerals and their sources

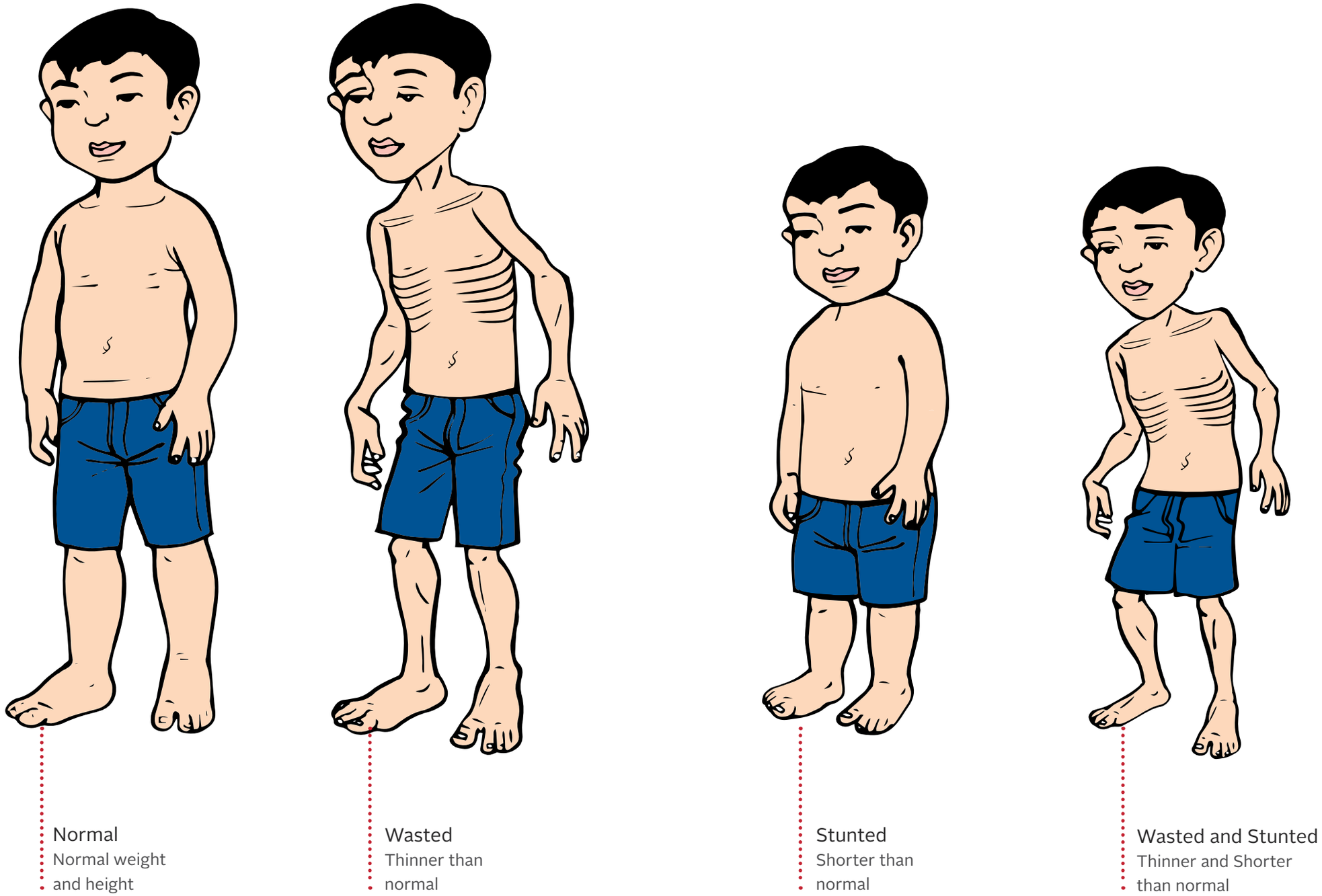


Figure 1.7 / Visual aid 1.2 Wasting and stunting signs

Activity 1.4

Identifying malnutrition signs

Purpose

to enable the participants to:

- develop a better understanding of how to identify the different types of malnutrition and their causes
- identify some common vitamin and mineral deficiencies and suggest ways to prevent them

Time

45 mins

Materials

- flip chart
- permanent pens
- tape
- Visual aid 1.1
- Visual aid 1.2

Instructions

Step 1 — Participant action

Signs of wasting and stunting — 5 mins

1. Ask the participants if they have seen someone who is under-nourished. How do we know when someone in the community is suffering from under-nutrition? What are the signs of under-nutrition? Write their responses on the flip chart, discuss what they have said and make sure you include:
   - feeling weak and dizzy
   - numbness in feet and hands
   - pale lips, pale skin
   - being too thin
   - children being too short
   - frequent illness
   - night blindness

Step 2 — Facilitator action

Wasting and stunting — 20 mins

1. Show the participants Visual aid 1.2 of a normal, wasted and stunted child.
2. Explain that the first picture shows a normal child. The second is a child of the same age showing signs of wasting. The child is the same height as the normal child but he is too thin. The third is a picture of a child of the same age showing stunting. He is too short for his age. The last picture shows a child who is both wasted and stunted.
3. Ask the participants which type of under-nutrition shown in the picture do they think is the most common in their community.

4. Note that studies done in 2010 found that 1 in 12 children under five years old in Myanmar are too thin for their age while 1 in 3 are too short for their age.
5. Ask what they think the main causes of the wasting and stunting are in Myanmar.
6. Ask which people in their community they think are most at risk from malnutrition and why.
7. Ask what the effects of stunting are on learning ability, education and future productivity.
8. Discuss their responses.

Step 3 — Participant action

Vitamin and mineral deficiencies — 10 mins

1. Explain that we will now look more at the protective foods which contain nutrients called vitamins and minerals. Ask the participants if they can name any vitamins or minerals and say what their function for our health is.
2. Discuss the symptoms of common vitamin deficiencies, which can be found in **Appendix 2**. Ask the participants if they have seen anybody suffering from a vitamin deficiency in their community. Point out that a lack of any nutrient can make a person sick. Ask the participants if they know which vitamin or mineral deficiency causes each symptom.
3. Show the picture of the three food groups depicted in **Visual aid 1.1** and ask for volunteers to show examples of foods which can address each deficiency.
4. While discussing the pictures note that they show very extreme cases of nutrient deficiencies. Often a person can still be suffering from problems related to the deficiency even if you can't see any visible signs of deficiency.
5. Explain that Vitamin A, B1, **iron** and **iodine** are lacking in many people's diets in Myanmar.

Step 4 — Reflection

Reflect on the learning process — 10 mins

1. Ask the participants what they have learnt from the activity.
2. Discuss why it is important to know some of the common signs of malnutrition. How does this help us to prevent malnutrition in the family?

Key Messages

- Malnutrition in children can be seen when they do not grow properly due to not getting enough food or not getting the right type of food. Wasting is seen when a child is too thin for his or her age. Stunting is seen when a child is too short for his or her age.
- It is important to eat a variety of foods every day, especially different types of fruit and vegetables of different colours, such as dark green leafy vegetables.
- Young children and pregnant and breastfeeding women need to eat body-building foods (protein) and protective foods rich in vitamins and minerals.
- Everyone should use iodised salt

Session 1.5

The intergenerational cycle of malnutrition

Background 1.5

How malnutrition passes between generations

Malnutrition continues from one generation to the next. A woman who does not receive proper nutrition will be more likely to give birth to a baby with low birth weight. A baby with low birth weight will be more likely to become malnourished during childhood and have developmental difficulties. This child will be at risk for being an undernourished teenager and grow up to be a stunted adult. Stunted adults are more likely to give birth to babies with low birth weight. Early pregnancy during adolescence can also lead to higher risk of a baby being born with low birth weight. If women are undernourished when they become pregnant they will most likely become even more undernourished, making both mother and baby more at risk of poor health outcomes. The cycle can continue like this from generation to generation.

The first 1000 days

The most important time for a person to be well-nourished is from conception to a child's second birthday. We call this important time the first 1000 days. Good nutrition during this time for mother and child has lasting positive effects for the rest of the person's life. Malnutrition during this time can have irreversible negative consequences for both mother and child.

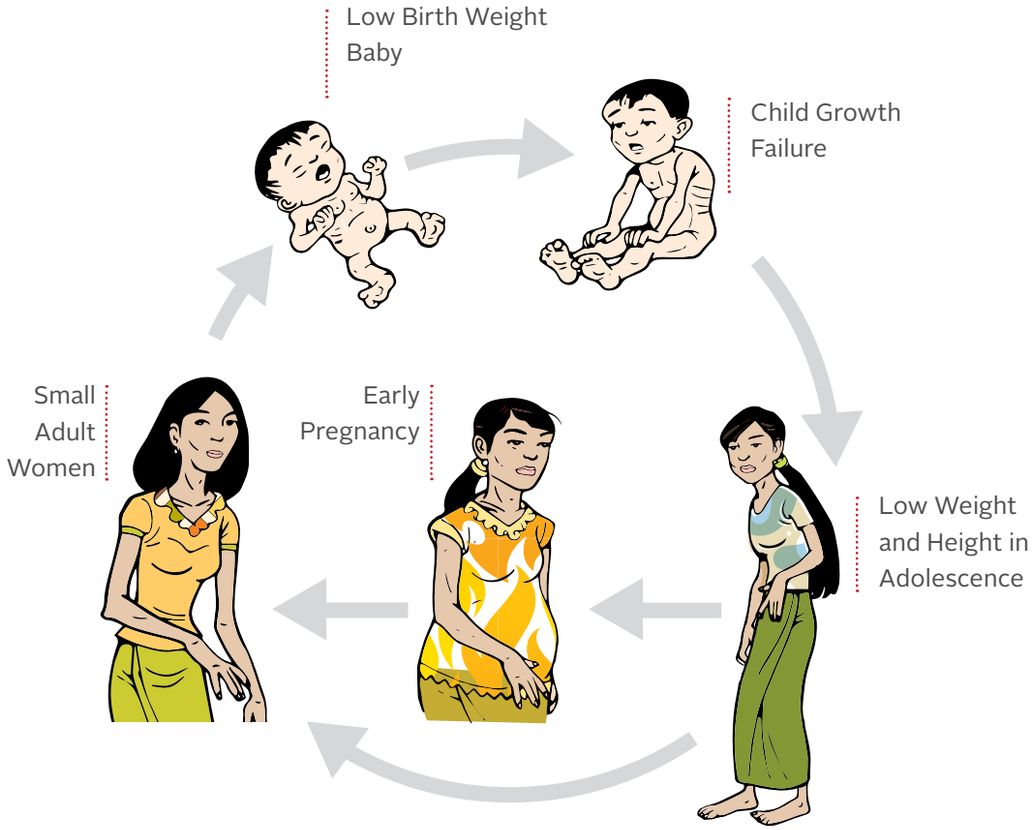


Figure 1.8 The intergenerational cycle of malnutrition[14]

Breaking the cycle

The cycle of malnutrition can be broken by:

- educating men and women, especially young and adolescent women, in reproductive health
- practicing family planning
- receiving proper antenatal care
- practicing proper Infant and Young Child Feeding (IYCF) practices, as described in **Session 2.3** and **Session 2.4**
- getting immunised
- ensuring that children, especially girls, have the opportunity to go to school
- eating diverse and balanced diets throughout the whole life, especially during vulnerable periods in the life cycle, such as when a woman is pregnant and breastfeeding or when a child is under two years old

[14] Institute of Public Health Nutrition Directorate of Health, Ministry of Health and Family Welfare (2011)

Activity 1.5

Cycle of malnutrition drama

Purpose

To enable an understanding of:

- ... the concept of the intergenerational cycle of malnutrition
- ... ways to break the cycle
- ... the importance of the first 1000 days

Time

1 hr 10 mins

Materials

- ... flip chart
- ... permanent pens
- ... tape
- ... two copies of skit script
- ... a picture of the intergenerational cycle of malnutrition

Preparation before day of activity: find two community volunteers (either men or women) to play two women in the drama. Review the scripts with them so that they can be familiar with what they have to read.

Instructions

Step 1 — Participant action

The story of Cho Cho and Po Po — 30 mins

1. Ask the two volunteers to read the story out loud, taking turns reading their parts. Stop the story at the places indicated to ask the questions.

Script: The story of Cho Cho and Po Po

Po Po: Mingalabar! My name is Po Po. I am a primary school teacher and I live in Ywar Thar Yar village. I would like to tell you about my life so far.

Cho Cho: Mingalabar! My name is Cho Cho and I am Po Po's neighbour. We have been friends since childhood and I would also like to tell you about my life so far.

Po Po: Before I start talking about my life, I think I should tell you about my parents first. My parents are also friends with Cho Cho's parents. They got married and gave birth to us almost at the same time.

Cho Cho: Actually, I am about one month older than Po Po. Our birth weights did not differ very much but we both seemed smaller than other children of the same age.

Po Po: The midwife from the health centre of a nearby village visited our homes right after our mothers gave birth to us. Both of our mothers received valuable information on not only how to eat while breastfeeding, but also on child feeding practices. Both of our mothers shared child caring information they received from the midwife with their family members.

Cho Cho: My father and my grandmother did not agree

with the new messages from the midwife about child caring practices. My mother avoided eating all kind of beans, legumes, vegetables, fruits, eggs and meats because she and her mother believed that those foods could be harmful for the health of the mother and child.

Po Po: My father appreciated the advice given by the midwife even though my grandmother had some objections. My mother received a balanced diet while she was breastfeeding me. She ate diverse foods in her daily diet. Her husband, my father gave her time to rest and to breastfeed. He also helped with other chores.

Discussion

1. Stop the story and ask the following questions:
    - Is there a midwife who visits pregnant women your community? How often does she come to the community? What type of advice does she give to mothers? Does she also speak with fathers and other family members? What do you think about the advice that the midwife gave Po Po's mother?
    - What are the differences between the support which Po Po's mother and Cho Cho's mother got from their own husbands and mothers?
2. Make sure that the participants include the following points in their answer:
    - Cho Cho's mother avoided certain healthy foods during pregnancy and breastfeeding because of her father and grandmother ignoring the midwife's advice.
    - Po Po's mother was given a diverse, balanced diet during her pregnancy and was cared for and supported by her husband.
3. Ask the script readers to continue with the story.

Cho Cho: My mother introduced semi-solid foods when I was two months old and stopped breastfeeding when I was 20 months old as she thought that I was getting enough nutrients from eating just tamingazi[15] three times a day.

Po Po: At six months old, my mother introduced semi-solid foods to me including vegetables, eggs, meat, fish and beans in addition to rice. She continued breastfeeding me till I was two years old.

Discussion

1. Stop the story and ask the following questions:
    - What are the differences are between Po Po and Cho Cho's mothers' behaviour now? Make sure that they include the following answers:
        - Cho Cho got solid food at two months old (only tamingazi three times per day while Po Po was given semi-solid food at six months old (including fish, eggs, vegetables, meat and beans with rice.)
        - Cho Cho's mother stopped breastfeeding her at one year and eight months old while Po Po's mother breastfed her until she was two years old.
    - What are the potential consequences of these decisions?
    - Did Cho Cho's mother have a choice?
    - Do you see this happening in your community?
    - Why are some households able to take actions from the information from the midwife and others household cannot?
2. Note that the most important period for good nutrition in a person's life is from the time when a woman becomes pregnant up to a child's second birthday. We call this important time the first 1000 days.

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[15] Tamingazi is a thick paste made from boiled rice."

3. Ask the script readers to continue with the story.

Cho Cho: When we turned five years old, we went to the same school in the village. Po Po received better scores at school while I was facing many learning difficulties. I left school before I finished G4.

Po Po: For me, I continued doing well in my education. I moved to school in town for high school education and after that, I went to a university in Yangon. I graduated after five years of university and returned to my village as a primary school teacher.

Discussion

1. Stop the story and ask the following questions:
   - Why did Po Po receive better scores?
   - Why do you think that Cho Cho had to leave school?
   - Does this happen in your community?
2. Make sure that one answer is that Cho Cho's poor diet may have caused her learning difficulties.
3. Ask the script readers to continue with the story.

Cho Cho: During the same time, I wasted several years because of repeated illnesses and could never restart my studies again. Then I married a young boy in the village who was two years older than me. At that time I was only 15 years old. Although I was not in good health the only way I could earn some income in the village was through physical labour. I became pregnant for the first time at 17 years old but the pregnancy ended in premature stillbirth. Now, my health is worsening and my family's economic situation is also getting worse. I am very unhappy in my life.

Po Po: Now I was very happy to return to my family and lovely village. After a year, I married a handsome man who is also a male teacher in the same school. We met each other while we both were at university. I got pregnant for the first time six months into our marriage. During my pregnancy I ate a balanced diet every day and I didn't have any particular difficulty when I gave birth to my first daughter. She is so healthy and strong and is now three months old. I made a commitment to my daughter that I will breastfeed her exclusively until she is six months old. Don't worry, Cho Cho, My friend. Please don't feel frustrated. I am here to help you now. Although you lost your first child, I am confident that you will have a healthy child if you follow my suggestions.

Discussion

1. Stop the story and ask the following questions:
   - Why was Cho Cho always getting sick?
   - Why did she marry so early? Does early marriage happen in your village?
   - Why is pregnancy at a young age not a good idea?
   - Why is the economic situation worse for the family of Cho Cho?
2. Make sure their answers include the following answers:
   - Having a poor diet can make you get sick more easily and have worse symptoms than people who have a balanced, nutritious diet.
   - Pregnancy in adolescence can compromise the health of the mother, whose body might be still growing, and can lead to a low birth-weight baby who is undernourished.

3. Emphasise that under-nutrition continues from one generation to the next. A woman who does not receive proper nutrition will be more likely to give birth to a baby with low birth weight. A baby with low birth weight will be more likely to become malnourished during childhood and have learning difficulties.

Step 2 — Participant action

Breaking the cycle — 25 mins

1. Divide participants into small groups of no more than five people.
2. Ask each group to suggest some ways to break the cycle of malnutrition being passed from mother to child. Allow 15 minutes.
3. Bring the groups together and ask each group to present their work, one after the other.
4. After each group has presented ask the other participants if they have any questions.

Step 3 — Discussion

Discussing solutions — 5 mins

1. Discuss the presentations and make sure that the following points are included in the discussion:
    - All community members and especially young women and adolescent girls need to be educated about health and nutrition.
    - Community members need to be encouraged to practice family planning. They should discourage adolescent girls from becoming pregnant and to help women allow time between pregnancies so that their bodies can recover.
    - Women should receive proper care after their babies are born with accurate advice from midwives.
    - Mothers should practice proper Infant and Young Child Feeding. They should exclusively breastfeed for the first six months and introduce diverse, semi-solid food at six months old.
    - Babies should be immunised against childhood diseases.
    - Women should be encouraged to eat diverse and balanced diets especially in adolescence, pregnancy and when they are breastfeeding.
    - Women should be supported by their families and communities in carrying out all of the above points.

Step 4 — Reflection

Reflect on the learning process — 10 mins

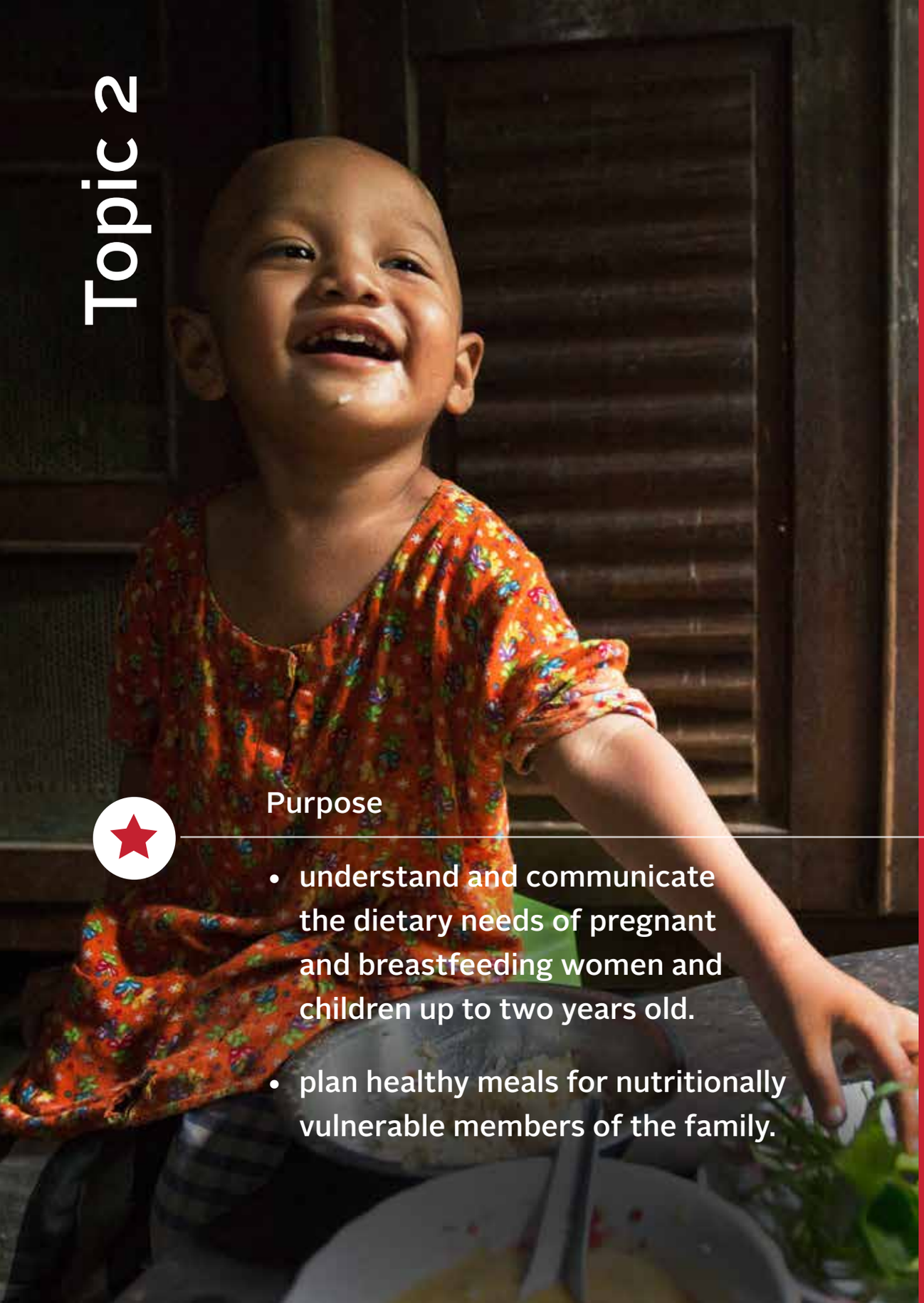
1. Ask the participants what they have learnt from the activity.
2. Discuss why it is important to understand how malnutrition can be passed between generations.
3. Ask how this information can help them to reduce the transmission of malnutrition between generations.

Key Messages

- The most important time for good nutrition in a child's life is the first 1000 days from when a woman becomes pregnant until a child's second birthday.
- Good nutrition in the first 1000 days has lasting positive effects for the rest of the person's life.
- Malnutrition in the first 1000 days can have irreversible negative consequences on the child.

Topic 2

Family nutrition



Purpose

- understand and communicate the dietary needs of pregnant and breastfeeding women and children up to two years old.
- plan healthy meals for nutritionally vulnerable members of the family.

Topic overview

Notes to facilitator

Before conducting this session, ensure the participants have covered the content from **Topic 1**, especially the food groups.

- The introduction and background sections are for you to read before the session. The activities describe what you can do with participants during the session.
- The activities are just a guide. You should adapt them to meet the needs and literacy level, cultural requirements and environment of the participants in your area.
- Use introductory exercises, ice breakers and trust building exercises to help participants to get to know one another. You can find examples in Appendix 1.
- Use energisers if participants seem to be getting tired. Examples also found in Appendix 1.
- If any participants are not able to read or write easily then use pictures as much as possible.
- Try to avoid talking too much. Keep the activities fun and active.
- Correct any incorrect opinions or information given by the participants.
- At the end of the activity reflect with the participants on what you have learnt together and review the key messages.

Introduction

This topic looks at healthy food for different family members. All family members need to have a healthy **balanced diet** comprising food from the three **food groups** each day.

A healthy diet for women

Women need a particularly healthy **diet**. From adolescence, girls need a healthy nutritious diet for their own growth and good health and to prepare their body for pregnancy and breastfeeding when they become adults. Pregnant and breastfeeding women need to eat more food and a variety of foods to be healthy since healthy mothers have healthy babies.

Growing children depend on nutrition from their mothers' bodies during pregnancy. So pregnant women need to have a nutritious, balanced diet and increase the number of meals they eat each day from three to four They need to take extra rest during pregnancy to conserve energy for their children's growth and for their own health.

A healthy diet for infants and young children

Children should breastfeed exclusively from the first hour of birth until they are six months old. The first milk, also known as **colostrum**, should be fed to the child.

From six months old onwards, other foods should be gradually introduced. These **first foods** should consist of a variety of family foods, which should be pounded, mashed or chopped depending on the age of the infant. They should be given at the correct frequency and in the correct amount. The texture of the food should be appropriate for the age of the child. **Healthy snacks** should be offered between meals. Breastfeeding should continue until the child is two years old or beyond.

Cultural practices and nutrition

Many cultural practices recommend restricting the diets of pregnant and breastfeeding women and children. Breastfeeding and child-feeding can also be influenced by some cultural beliefs. Fathers, grandmothers and other community members must support women in eating well especially during pregnancy and breastfeeding. They should encourage mothers to breastfeed exclusively from birth until the child is six months old and to feed the older child a wide range of healthy foods.

Nutritious family meals

Background 2.1

The components of a nutritious meal

Everyone in the family needs a healthy balanced diet with correct amounts of food to satisfy their energy and nutrient needs. We need to eat a variety of food from the three food groups in order to receive all of the **nutrients** to keep us healthy. Try to eat different vegetables and fruit each day to ensure that we get the different **vitamins and minerals** contained in them.

Balanced meals

Balanced main meals consist of **energy-giving foods** such as rice or noodles served with dishes made from **body-building foods**, such as curries, salads and soup made with animal products and legumes, and **protective foods**, such as vegetables or fruit. They should be cooked with oil, herbs and spices and no more than half should be energy-giving foods.

Fresh fruit can be served after the meal or as a snack. **Vitamin C** in fruit helps the body use the iron from the meal, which helps to build healthy blood. Lime, tomatoes and other sour fruits and vegetables are examples of foods high in vitamin C.

Drinks and snacks

All family members should be encouraged to drink plenty of water during the day. Tea, coffee and laphet (a tea-leaf snack) should be avoided during meals and for one or two hours afterwards.

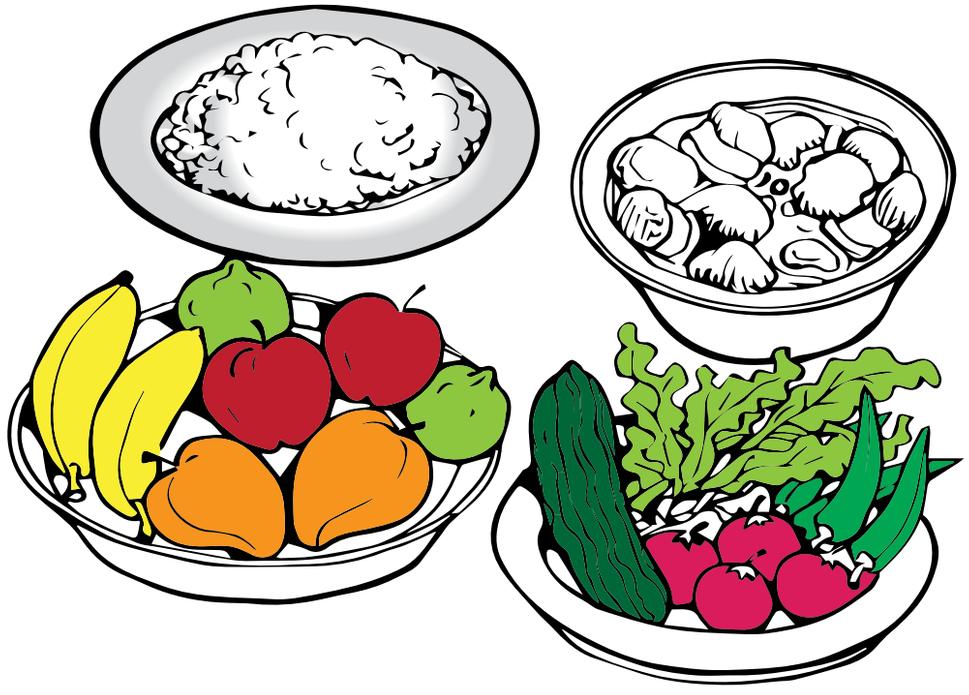


Figure 2.1 / Visual aid 2.1 Components of a balanced meal

They can interfere with how the body uses some of the important nutrients in a meal.

Eat healthy snacks made from local foods between meals. These include fruit, roasted groundnuts, sesame or other seeds, boiled eggs, bean cakes and boiled roots and tubers, such as sweet potato, taro, and cassava. Avoid refined or processed food and snacks which contain large amounts of salt, sugar, colouring and monosodium glutamate (MSG). Eating large amounts these things can be bad for the health. They are also expensive, and do not contain many nutrients.

Activity 2.1

Planning nutritious family meals

Purpose

to enable the participants to understand and communicate how to plan nutritious family meals

Time

1 hr 10 mins

Materials

- flip chart
- permanent pens
- Tape
- Visual aid 2.1

Instructions

Step 1 — Discussion

Family meals — 10 mins

1. Ask the participants the following questions. Write the responses on the flip chart and discuss them.
   - Who usually makes the decisions about what food is eaten in the household?
   - Who usually provides the food in the family? Mother, father or someone else? From where does it come? Does it come from shops, the farm, or wild collection?
2. What other factors go into planning meals? Do factors include available time, fuel and access to clean water?
3. Explain that organizing and making nutritious meals can be hard work and needs support from all family members.

Step 2 — Participant action

Ideas for main meals — 20 mins

1. Show the participants Visual aid 2.1 of the components of a balanced main meal. Ask them to describe the different components of the meal shown on the diagram.
2. Note the following:
   - The exact food and nutrient requirements for each person depends on their age, weight, sex and activity level. But everyone except children under six months old needs to eat foods from all three food groups every day in order to be healthy.

... We have a balanced diet when we eat food from each food group in the right proportions. For example, a large plate of rice with a few beans and few slices of cucumber includes all three food groups. However, it is not balanced because the amount of beans and vegetables is too small, and the amount of energy-giving food is too great.

... It is not always possible to eat foods from all food groups in every single meal, but we must try to eat from all food groups within one day.

3. Divide the participants into four small groups and give each group flip chart page and a permanent pen.
4. Ask the groups to list or draw some dishes which could make up a main meal using locally available ingredients. Allow 15 minutes.

Step 3 — Participant action

Participants' meals

20 mins

1. Bring participants together and have each group present their group work and explain how they designed the prepared dishes.
2. After the group has presented ask the other participants if they have any questions about the meal.
3. Ask the participants to identify dishes which have been mentioned which are rich in protective nutrients especially **vitamin A**, Vitamin B, iron and **iodine**. You can refer to Appendix 2 to help you.
4. Discuss how realistic it is for their community members to access these types of foods.

Step 4 — Reflection

Reflect on the learning process

20 mins

1. Ask the participants what they have learnt from the session.
2. Discuss why it is important and useful to know how to make nutritious, balanced family meals.
3. Ask the participants to say how they will use this information to improve the diet of their families.

Key Messages

- Family meals must be balanced with food from the three food groups in the right proportions.
- Family meals should include a variety of different foods, which should vary each day.

Nutrition for women

Background 2.2

A healthy diet for women

All women should eat a healthy balanced diet even before they get pregnant. Adolescent girls need to eat nutritious food because they are growing quickly. During adolescence, their bodies are developing and preparing for the time they will become pregnant and support a growing baby. It is better for a woman to wait until adulthood to become pregnant to allow her own body to finish growing.

Nutrition and pregnancy

If women are undernourished when pregnant, they are more likely to have problems when giving birth and their children are likely to be too small. It can cause children to grow and develop slowly, get sick easily and develop health and learning problems throughout life.

Pregnant women need to eat more nutritious food each day because they are feeding themselves and their growing babies. Rice alone is not enough to sustain mothers during pregnancy and breastfeeding. Pregnant women should eat well-balanced meals that contain:

- energy-giving foods such as rice, potatoes, cassava and taro
- body-building foods such as eggs, meat, offal, fish, poultry and legumes
- protective foods especially yellow and orange fruit and vegetables and dark green leafy vegetables

She should drink plenty of clean water, use **iodised salt** and take the iron-folate pills given to her by her auxiliary midwife, community health worker or midwife.

Nutrition and breastfeeding

Breastfeeding mothers need even more food than pregnant mothers so that their body can make enough breast milk for their children. They should eat the equivalent of one extra meal each day. Like pregnant women, they should eat well-balanced meals that contain:

- energy-giving foods such as rice, potatoes, cassava and taro
- body-building foods such as eggs, meat, offal, fish, poultry and legumes
- protective foods especially yellow and orange fruit and vegetables and dark green leafy vegetables

They should also drink plenty of fresh, clean water.

Fathers, family and community

Some cultural beliefs prevent pregnant or breastfeeding mothers from eating certain foods. Emphasise that restricting foods can cause serious harm to women and children. The traditional practice of giving the most nutritious family food to the father can also negatively affect the health of women and children if they also do not receive sufficient nutritious food.

Fathers and other family and community members can support pregnant or breastfeeding women by:

- helping them with their chores
- making sure that they have a healthy, balanced diet with food from all three food groups
- making sure that they get plenty of rest
- accompanying pregnant women to clinics for pre- and post-natal care
- making sure that pregnant women take all of their iron-folate pills
- making sure that breastfeeding women take their vitamin A supplement

Activity 2.2

Maternal nutrition discussion

Purpose

to enable the participants to understand and communicate:

- ... the nutrition needs of pregnant and breastfeeding women
- ... what foods are best for pregnant and breastfeeding women

Time

1 hr 10 mins

Materials

- ... flip chart
- ... permanent pens
- ... tape

Instructions

Step 1 — Discussion

Why mothers need a healthy diet

10 mins

1. Ask the participants why pregnant and breastfeeding women need a balanced diet.
2. Write their answers on the flip chart and ensure that they include:
   - A pregnant woman needs more nutritious food every day to feed herself and her growing child.
   - If a woman is undernourished when she is pregnant, she is more likely to have problems when giving birth and her baby is likely to be too small.
   - A small baby may grow and develop slowly, get sick easily and develop health and learning problems throughout life.

Step 2 — Participant action

Why women may not have a healthy diet

20 mins

1. Ask the participants to divide into four groups.
2. Ask them to list reasons why pregnant and breastfeeding women may not get a healthy balanced diet. Allow 20 minutes.

Step 3 — Participant action

Participants' reasons for women's unhealthy diets

20 mins

1. Bring the participants together and have each group present their group work.

2. After each group has presented ask the other participants if they have any questions about the presentation.

3. Discuss the presentations and ensure that their reasons included:

   ... lack of knowledge about what food is most nutritious
   ... lack of money to buy nutritious ingredients
   ... cultural beliefs about what should and should not be eaten during pregnancy and breastfeeding
   ... lack of women's involvement in decision-making about food in the family
   ... lack of time, perhaps because she is looking after children, cooking, cleaning, fetching fire wood or doing other work
   ... the tradition of giving the best and first food in a family meal to the male head of household
   ... fear of having a big baby which could make the birth difficult

4. Ask if there are any foods pregnant or breastfeeding mothers should not eat. What are the reasons?

Step 4 — Participant action

Reflect on the learning process — 20 mins

1. Ask the participants what they have learnt from the session.
2. Discuss why it is important to know what makes a healthy diet for pregnant and breastfeeding women.
3. Ask the participants to explain how they will use this information to make sure that pregnant and breastfeeding women in their community get a nutritious diet.

Key Messages

- Healthy mothers are more likely to have healthy babies.
- Pregnant and breastfeeding women should eat balanced meals consisting of the three food groups.
- They should use iodised salt and drink plenty of clean water.
- They should take the iron-folate pills given to them by their auxiliary midwife, community health worker or midwife.
- Fathers, families, and communities can help pregnant and breastfeeding women to be healthy.

Session 2.3

Feeding children under six months old

Background 2.3

Breastfeeding children under six months old

Good Infant and Young Child Feeding (IYCF) practices begin with **exclusive breastfeeding**. Children need a diet which will give them the right nutrients to grow and develop properly and to protect them from disease. From birth until they reach six months old, children get everything they need from a mother's breast milk. They do not need any other food or drink. Any other food or drink at this age can make children sick.

Starting breastfeeding

As soon as children are born they should be put to their mothers' breast and allowed to drink the thick and yellow first milk, known as colostrum. This colostrum helps protect newborn babies from disease. Starting breastfeeding from the first hour of birth helps mothers' bodies recover more quickly from birth and produce more breast milk.

Good Breastfeeding Practices

Frequent breastfeeding helps mothers produce more milk. Children should be fed on demand, which means breastfeeding their child whenever the child wants during the day or night. The child should be allowed to finish feeding from one breast before switching to the other. This provides children with the nutritious **hind milk**, which has different nutrients from the milk that comes out of the breast at the beginning of a feed. Under normal circumstances, infants under six

months old should breastfed about ten times over the course of a day and night. When mothers or children are sick, they should continue breastfeeding. When children are sick, they should be breastfed even more frequently to ensure that they are adequately nourished.

Support from fathers, families and the community

Fathers, traditional birth attendants, midwives, health workers and grandmothers should all encourage new mothers to put the baby to the breast within the first hour of birth and exclusively breastfeed their child. They should ensure mothers get a nutritious balanced diet, plenty of rest and help with domestic chores.

Activity 2.3

Breastfeeding practices

Purpose

to enable the participants to understand and communicate the importance of:

- ... feeding colostrum to a newborn baby
- ... exclusive breastfeeding from birth to six months old

Time

1 hr 10 mins

Materials

- ... one green card and one red card (or any other two colours)
- ... tape
- ... flip chart
- ... permanent pens

Instructions

Step 1 — Participant action

Local breastfeeding practices — 40 mins

1. Place the red card on one side of the room and the green card on the other.
2. Explain the following: all participants stand in the middle of the room while you read out a statement about breastfeeding. Each participant decides if they agree or disagree with the statement. Those who agree move to the green card, and the people who disagree move to the red card. When everyone has made their decision, the group discusses their different opinions. Then they repeat for the next statement. Refer to statements in **Table 2.1**.
3. Read the first statement and follow the instructions above.
4. For each statement ask those next to the green card why they agree with the statement. Then those next to the red card why they disagree. Encourage discussion of each statement and then give the correct message.
5. Participants should return to the centre of the room before each statement is read.

Step 2 — Discussion

Benefits of exclusive breastfeeding — 20 mins

1. Ask the participants to explain what exclusive breastfeeding means. Write their definitions on the flip chart and discuss them.
2. Emphasise that exclusive breastfeeding is the practice of feeding a child only breast milk and no other food or drinks from the first hour of birth until six months old.

Statement	Correct answer
Mothers should put their baby to the breast as soon as they are born to ensure that the baby benefits from the first yellow milk.	(Agree) The first milk (colostrum) is very good for babies as it helps protect them from disease. Not giving babies the first milk increases the risk of illness.
Until they are six months old, a child living in a hot climate needs water in addition to breast milk.	(Disagree) Breast milk is 90% water and it is enough for the child up to six months old.
If a mother comes from spending time under the hot sun outside, her breast milk will become hot and it should not be fed to the child. It can give the child diarrhoea.	(Disagree) Breast milk never causes diarrhoea. Its temperature is maintained at normal levels by the body and is never harmful to the child.
A sick child should be breastfed more frequently.	(Agree) Sick children should be breastfed more frequently and for longer periods of time to ensure that they receive the nutrients and liquid they need to get better.
If a mother of a child under six months old thinks that she is not producing enough breast milk, the child should be fed milk powder or breast milk substitutes.	(Disagree) The more a child sucks, the more the breast will produce milk. Mothers who do not feel like they have enough milk should breastfeed the child often, at least 10 times per day for newborn babies. Mothers should breastfeed their children whenever the children want, known as feeding "on demand". Mothers also need to eat and drink more to have the energy to make breast milk, and can see a health professional for support.
Rice porridge should be given to children under six months old to make them healthier and stronger.	(Disagree) Children should feed on breast milk alone until they are six months old. Breast milk is the only food that provides all the nutrients that children need during that period. Other food or drink can make them sick.
Even if their child gets flatulence, mothers should not give them traditional medicine.	(Agree) Mothers should not give any medicine to their child without advice from basic health staff or a doctor.

Table 2.1 Statements on local breastfeeding practices

Benefits to the mother	Benefits to the child
It helps her recover from the birth more quickly	It strengthens the bond between mother and child
It reduces her risk of breast and ovarian cancer after menopause.	It meets the entire water and food requirement that are critical for the child's health, growth, and development.
It helps the family save money as they do not have to buy infant formula for the child.	It stimulates a child's brain
It reduces her risk of anaemia by conserving iron (by delaying menstruation)	Breast milk, especially the first milk (colostrum) helps protect infants from disease, especially diarrhoea and pneumonia
It helps to delay her next pregnancy by reducing fertility.	It provides iron to the child
It reduces her workload since she does not have to prepare other food for the child.	It provides food which is easily digested, clean and safe.

Table 2.2 How mothers and children benefit from breastfeeding

3. Divide the flip chart page into two columns. Tell the participants on the left side of the room that they are going to suggest some points on the benefits of breastfeeding for the mother while participants on the right will list benefits for the child.
4. Ask a volunteer from the group on the left side to come up and write one benefit of breastfeeding to mothers in the left column of the flip chart page. Discuss the point and ensure that it is correct.
5. Then ask a volunteer from the group on the right to come up and write one benefit of breastfeeding to children in the right column of the flip chart page. Check and discuss this suggestion too.
6. Repeat these last two actions until you have written up and discussed all of the points which the participants developed. Add any benefits listed in **Table 2.2** which may not have been included. Make sure that you correct any misconceptions or incorrect points.

Step 3 Reflection

Reflect on the learning process 10 mins

1. Ask the participants what they have learnt from the session.
2. Discuss why it is important to understand the benefits of exclusive breastfeeding and the proper ways to breastfeed exclusively.
3. Ask how they will use this information to help women in their family and community improve their breastfeeding practices.

Key Messages

- Mothers should begin breastfeeding within the first hour of birth. Early breastfeeding supports children's health and mothers' recovery.
- Colostrum, the thick and yellow first milk, is good for children and helps to protect them from disease.
- Breast milk is the complete food for children under six months old: it provides food and water, and protection from disease.
- Children should not be fed any food or drink other than breast milk until they are six months old. These are not necessary and can make the child sick.

Session 2.4

Feeding 6 to 23 month-old children

Background 2.4

Feeding children from 6 to 23 months old

Breast milk can supply about half of the energy needs of children from 6 to 11 months old. The other half must come from other nutritious foods. Breast milk does not contain enough iron and vitamin A for children after they reach six months old. From this age children are ready to eat and digest other foods from the three food groups.

What should children from 6 to 23 months old eat?

If children from 6 to 23 months old eat a variety of nutritious foods in addition to being breastfed they grow more quickly and are sick less often. Children do not need special food. They can eat the same food as the rest of the family as long as it is mashed and made soft for them to eat. As children begin to eat solid foods, be careful to avoid foods that may cause choking. Make sure that food which is not soft in texture is chopped into small pieces and that any bones are removed from meat, poultry or fish. Children eat less than adults at each meal but they need to eat more frequently. Breastfeeding should continue until the child is two years old or older.

Breastfeeding children from 6 to 23 months old

It is important that children continue to breastfeed until they are at least two years old because it protects them from disease. Breastfeeding also provides comfort and contact between mothers and children which improves child development.

First feeding guidelines

When planning a child's first foods it is important to consider the following:

Frequency of feeds	Children under two years old should be fed more frequently than adults. How often children should be fed depends on their age.
Amount of food	How much children should be fed depends on their age. As children grow, the amount of food they need increases.
Texture of the food	Food should not be too thin or watery or contain any hard pieces which could cause children to choke.
Variety of food offered	Food should come from the three food groups. It should include meat and other animal products, legumes and oil seeds, and fruit and vegetables.
Active/ responsive feeding	Children should be encouraged but not forced to eat. Make meal times a fun, happy time. Be patient and praise children when they eat well. Avoid giving them large drinks before or during meal times. Feed them before they get too tired or very hungry.
Hygiene	Make sure that the food is prepared, eaten and stored in a way which avoids **contamination** by germs. Always wash your hands and your children's hands with soap and water before eating. Use clean utensils, clean food and clean water, and store food properly to avoid contamination.

As children get older they need larger and more frequent meals. Their food can be less mushy because as children grow from 6 to 23 month old they gradually become better at chewing and swallowing solid food.

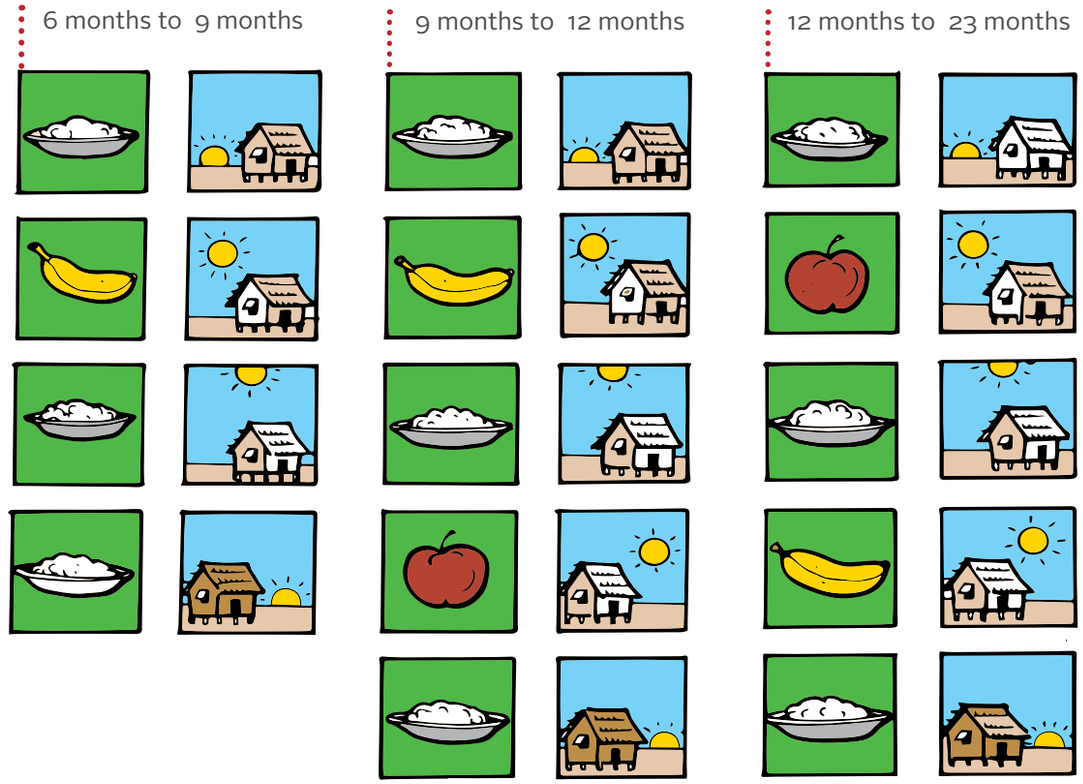


Figure 2.2 / Visual aid 2.2 Supplementing breastfeeding for 6 to 23 month-old children

Activity 2.4a

Tips for feeding 6 to 23 month-old children

Purpose

to enable the participants to understand and communicate correct information on feeding children who are 6 to 23 months old.

Time

50 mins

Materials

- ... flip chart
- ... permanent pens
- ... tape
- ... Visual aid 2.2
- ... three clear glasses
- ... about one litre of water
- ... large bowl or tray for catching water

Instructions

Step 1 — Discussion

Continued breastfeeding — 5 mins

1. Ask the participants if any of them have children and how old their children are. Ask them at what age children are first fed food other than breast milk in their community and why.
2. Ask them to describe the type of food that is usually fed to children first. Remind them that breast milk gives children under six months old all of the nutrients they need. When children reach six months old, the family should introduce some first foods because breast milk does not satisfy all of their needs from this age onwards. But remind them that breast milk is still an important part of children's diets until at least two years old.
3. Explain that you are going to demonstrate how breast milk contributes to the nutrition of children of different ages.
4. Ask them to suggest how much of their nutrient needs are provided by breast milk for a child under six months old, from 6 to 11 months old and from 12 to 23 months old.

Step 2 — Facilitator action

What breast milk supplies — 5 mins

1. Demonstrate the amounts of nutrients supplied by breast milk at various ages by pouring water into the glasses: one full to overflowing, one just over half-full and one that is one third full.
2. Write on a flip chart page: breast milk supplies all of the nutrients children under six months old need, more than half (60%) of the nutrients children from 6 to 11 months old need and a little less than half (40%) of the nutrients children from 12 to 23 months old need.

Age	Frequency	Amount per meal (use local containers to measure)	Texture
From 6 to 8 months old	- 2 or 3 meals - Frequent breastfeeding - 1 snack can be offered	2 or 3 tablespoons of food. Start with small tastes and then gradually increase the amounts to half of a 250ml cup or bowl	Medium-thick mashed bland food such as rice or potato or other energy food mixed with breast milk. Gradually introduce thick mashed or semi-solid family foods from all of the three food groups
From 9 to 11 months old	- 3 or 4 meals - Breastfeed - 1 or 2 snacks can be offered	Half of a 250ml cup or bowl of food	Introduce finely chopped family foods from all of the three food groups. Introduce finger foods
From 12 to 23 months old	- 3 or 4 meals - Breastfeed - 1 or 2 snacks can be offered	¾ to 1 full 250ml cup or bowl	Continue feeding family foods from all of the three food groups. Introduce sliced foods.

Table 2.3 Frequency of feeding, amount and texture of food for children from 6 to 23 months old [16]

Step 3 — Facilitator action

Tips on feeding children from 6 to 23 months old — 30 mins

1. Ask the participants what things we need to consider when feeding children their first foods. Make sure they mention:
   - ... the child's age
   - ... how many times per day they are feeding
   - ... how much to feed them
   - ... the texture, thickness and consistency of their food
   - ... how varied their food is
   - ... what hygiene procedures to follow when preparing the food and feeding
2. Explain that you are going to talk more about these important feeding considerations for children of different ages.
3. Show the participants **Visual aid 2.2** and give them the information in **Table 2.3**.

Step 4 — Reflection

Reflect on the learning process — 10 mins

1. Ask the participants what they have learnt from the session.
2. Discuss why it is important to know and understand correct feeding practices for children from 6 to 23 months old.
3. Ask how the participants will use this information to benefit their families and communities.

Key Messages

- From six months old onwards, children should be fed a variety of meat, fish, fruits, and vegetables, in addition to breast milk, to fulfil their needs.
  - Family foods are easy to mash/process for feeding young children.
  - Children from 6 to 23 months old are sick less often if they eat a variety of foods.
  - When feeding children from 6 to 23 months old remember to consider: frequency, amount, texture, variety and hygiene.
  - Young children have smaller stomachs than adults. They cannot eat a large amount at one time, so they need to eat more frequently.

[16] Adapted from UNICEF (2012) and USAID (2011)

Activity 2.4b

Variety and preparation of first foods

Purpose

to enable the participants to understand and communicate information on the variety and preparation of first foods for children from 6 to 23 months old

Time

1 hr 10 mins

Materials

- flip chart
- permanent pens
- tape

Instructions

Step 1 — Participant action

Considering variety for children 6 to 23 months old — 20 mins

1. Explain that you are going to work in groups to come up with a list of different types of food which can be given to children from 6 to 8 months old, 9 to 11 months old and 12 to 23 months old.
2. Divide the participants into four small groups.
3. Ask the first group to come up with a list of energy-giving foods which can be fed to children of the three different age groups.
4. Ask the second group to make a list of body-building foods to feed to children and young children of the three different age groups.
5. Ask the third group to make a list of protective foods which can be given to children of the three different age groups.
6. Ask the last group to come up with a list of snacks which can be fed to the three different age groups. Allow 10 minutes.

Step 2 — Participant action

Foods from each food group presentation — 20 mins

1. Bring participants together and have each group present their work.
2. After each group has presented ask the other participants if they have any questions about or additions to the presentation. Write these on a flip chart page to show to participants. Some ideas are given in Table 2.4.

Step 3 Discussion

Discussing food for children

20 mins

1. Ask the participants what are the differences between nutritious and less nutritious snacks. Ask them to give examples of nutritious and less nutritious snacks. List them on the flip chart in two columns. Table 2.5 shows some examples which may be included.
2. Remind the participants that it is better to feed children a mixture of foods from the different food groups.

Food group	Example of food	Texture
Energy-giving foods	Boiled or steamed rice	Mashed and softened with breast milk
	Boiled cassava, potato, taro	Mashed for small child, whole for children nine months or older
Body-building foods	Boiled or fried eggs, liver, fish, meat and chicken	Mashed with rice and breast milk for a young child, chopped for an older child
	Boiled green gram, chick peas, pigeon peas, shelled beans, groundnuts	Mashed with rice and breast milk for a young child, whole for an older child
Protective foods	Boiled or steamed pumpkin, yellow-fleshed sweet potato, green leafy vegetables	Mashed with rice and breast milk for a young child, whole for an older child
	Fresh papaya, banana, mango	Mashed for a young child, whole for an older child

Table 2.4 Examples of different types of food which can be given to children aged from 6 to 23 months old

3. Ask the participants how easy it is for their community members to access the types of food identified in the presentations.
4. Note that families should make feeding a happy experience for children so that they learn to enjoy eating. Ask the participants to suggest ways this could be done.
5. Finally ask the participants to suggest hygiene tips to follow when preparing and feeding first foods. Make sure to include these tips:
   - Always wash your hands before preparing food for the child.
   - Wash your hands and the child's hands before eating.
   - Use clean water to wash and cook the food.
   - Use clean and dry spoons, bowls, cups or other utensils to feed the child.

Healthy snacks and drinks	Unhealthy snacks and drinks
Boiled cassava, pumpkin or sweet potato, mashed with oil or eaten in pieces	Potato chips and other salty or fried food
Long beans, tomato and carrot	Cakes
Ripe fruit such as mango, papaya, banana and guava	Sweets and biscuits
Water	Tea or coffee
Goat or cow milk	Condensed milk or milk powder
Fresh fruit juice	Sodas and artificial juices purchased at the shop that are not made from real fruit

Table 2.5 Examples of some healthy and unhealthy snacks for children from 6 to 23 months old

Step 4 Reflection

Reflect on the learning process

10 mins

1. Ask the participants what they have learnt from the session.
2. Discuss why it is important to know about the kind of foods which children from 6 to 23 months old should eat and how to prepare this food.
3. Ask how this information will be used by the participants to benefit their communities.

Key Messages

- Children from 6 to 23 months old should be fed a variety of food from the three food groups including meat, fish, fruits, and vegetables, in addition to breast milk, to fulfil their needs.
- Family foods should be mashed or processed for feeding young children. As children get older they can gradually eat food which is less soft.
- Avoid feeding children unhealthy snacks.
- Practice good hygiene when feeding and preparing food for young children.

Activity 2.4c

Correct amounts of first foods[17]

Purpose

to understand the quantities of food that children from 6 months old to 2 years old need to eat.

Time

35 mins

Materials

- flip chart
- permanent pens
- tape
- a tablespoon (about 15ml)
- a 250ml cup or bowl
- a one-litre plastic bottle with the top cut off to make it easier to fill
- sand, flour or something similar

Adapt this activity by using measuring containers that people normally use in that community, such as bowls, cups, tins or spoons as long as they meet the measurement criteria.

Instructions

Step 1 — Participant action

The signs of a well-nourished child — 5 mins

1. Ask the participants what the signs of a well-fed child. Write their answers on a flip chart page. Responses may include that they:
   - ... are happy and enjoy playing
   - ... are bright-eyed, alert and notice things around them
   - ... grow taller
   - ... grow out of clothes
   - ... put on weight and gradually become too heavy to carry
   - ... have energy
   - ... do not get sick often and recover more quickly when sick

Step 2 — Participant action

The correct amounts of food for different ages — 20 mins

1. Divide the participants into four groups. Explain that each group represents children at different ages. Group one represents children at six months old, group two represents children at nine months old, group three represents children 12 months old and group four represents children at two years old.
2. Put two blank flip chart pages on a table or on the floor where all groups can see them. Make sure that everybody gathers around and can see what each group is doing.

[17] Adapted from: UNICEF (2012), WHO (2004), FAO and the Government of Namibia (2004) and Save the Children International Myanmar (2013)

Amount of first food when children turn six months old

1. Ask a participant from group one to hold out their hand. Ask another participant in group one to take the spoon and scoop three heaped spoons of sand into the other person's hand.
2. Explain that this is how much six month-old children can eat per day when they first start to eat food. They should have three small meals and as much breast milk as they will drink in a day.

3. Ask the first participant to empty the sand onto the left of the first flip chart page so that everyone can see the amount. Write "six months old" next to this pile.

Amount of food for nine month-old children

1. Ask a participant from group two to hold out the cup. Ask another participant in group two to take the spoon and scoop nine heaped spoons of sand into the cup. The bowl should be full.

2. Explain that children gradually need to eat more food each day until they reach about this amount per day when they turn nine months old. This is three times the amount needed by children when they first start to eat food. Children should have three meals per day, should still continue to have breast milk and now have one or two healthy snacks between meals.

3. Ask the first participant to empty the sand onto the right of the first flip chart page so that everyone can see the amount. Make sure the two heaps don't touch. Write "nine months old" next to this pile.

Amount of food for 12 month-old children

1. Ask a participant from group three to hold out the one litre bottle. Ask another participant in group three to scoop two full cups of sand into the bottle.

2. Explain that children gradually need to eat more food each day until they reach about this amount per day when they turn 12 months old. Each meal is now about a half to three-quarter cupful and this child should have three or four meals each day, continue on breast milk and eat one or two healthy snacks between meals.

3. Ask the first participant to empty the sand onto the left of the second flip chart page so that everyone can see the amount. Write "12 months old" next to this pile.

Amount of food for 2 year-old children

1. Ask a participant from group four to hold out the one litre bottle. Ask another participant in group four to scoop four full cups of sand into the bottle. This should fill the bottle.

2. Explain that children gradually need to eat more food each day until they reach about this amount per day when they turn two years old. This child should have about one cupful of food for each meal and eat three or four meals each day in addition to breast milk and two healthy snacks.

3. Ask the first participant to empty the sand onto the right of the second flip chart page so that everyone can see the amount. Watch that the heaps don't touch. Write "2 years old" next to this pile.

4. Explain that:

   ... parents have to be flexible because not all children eat the same amount of food even if they are the same age
   ... the best way to tell if a child is getting enough food is by the signs discussed at the start of the activity in step 1 (read out these signs again)

5. Remind everyone of the importance of variety in the food and giving healthy snacks between meals.

Step 3 — Reflection

Reflect on the learning process — 10 mins

1. Ask the participants what they have learnt from the session.

2. Discuss why it is important to understand the different amounts of food needed by children from 6 months old until 2 years old.

3. Ask how they are going to use this information to improve the feeding practices of children in their community.

Key Messages

- Children of different ages need different amounts of food. Gradually increase the amount of food given to children as they grow older.
- Children who are well-nourished generally have energy, are alert and grow.

Topic 3

Access to nutritious food

Purpose

to enable participants to plan sustainable ways to produce, harvest and buy nutritious food in the local community.

Topic overview

Notes to facilitator

Before conducting this session, ensure the participants have covered the content from **Topic 1**, especially the food groups.

- The introduction and background sections are for you to read before the session. The activities describe what you can do with participants during the session.
- The activities are just a guide. You should adapt them to meet the needs and literacy level, cultural requirements and environment of the participants in your area.
- Use introductory exercises, ice breakers and trust building exercises to help participants to get to know one another. You can find examples in **Appendix 1**.
- Use energisers if participants seem to be getting tired. Examples also found in **Appendix 1**.
- If any participants are not able to read or write easily then use pictures as much as possible.
- Try to avoid talking too much. Keep the activities fun and active.
- Correct any incorrect opinions or information given by the participants.
- At the end of the activity reflect with the participants on what you have learnt together and review the key messages.

Introduction

For people to have access to nutritious food it must be:

Available	It can be grown, collected from the wild or bought in the community in sufficient quantities all year round.
Affordable	It is reasonably priced so people are willing to purchase it.
Acceptable	People are willing to prepare and eat it

This topic looks at ways to make a wider range of nutritious food more accessible. It shows how food can be produced and collected locally without damaging or depleting natural resources such as soil, water and forests.

Then this session discusses how to make buying choices to purchase the most nutritious food available without wasting money.

Session 3.1

What can we produce or collect locally?

Background 3.1

Local food

Producing food at home, such as growing crops and keeping livestock, as well as collecting wild food can contribute to family **nutrition security**. These food sources depend on sustainable management of natural resources including water, soil and wildlife. A wide range of nutritious fruit, vegetables and other products can be gathered from forests or wetlands and grown in small, intensive household gardens. Even families who have no land or who are not farmers can grow a few vegetables close to their homes using space-saving methods such as growing in containers.

Some families put all of their energy into growing only one or two **cash crops**, such as rice, groundnuts or maize to sell, instead of growing a range of crops to feed the family. These families can still achieve a diverse nutritious diet through planting home gardens, collecting wild food and purchasing food.

Many families collect wild foods to supplement their diets but often people consider them less nutritious than food which is purchased or cultivated. In fact, many wild foods are as nutritious and are sometimes even more nutritious than the foods we buy or grow. They can often survive drought or other extreme weather conditions and they do not require expensive chemicals to grow.

This session discusses different food products that can be bought, produced or collected within the local community at different times of year. Keeping livestock may also be discussed.

Activity 3.1

Discussing access to nutritious food

Purpose

to enable the participants to identify the different nutritious foods which can be bought, produced or harvested locally

Time

1 hr

Materials

- flip chart
- permanent pens
- tape

Instructions

Step 1	Participant action
Local food from the food groups	15 mins

1. Remind the participants about the three food groups and their functions.
2. Divide the participants into four groups. Explain that:
   - the first group is going to list foods which they usually buy or grow which come from the **energy-giving food group**
   - the second group will list foods which they buy or grow from the **body-building food group**.
   - the third group will list foods which are grown or bought from the **protective food group**.
   - the last group will list foods which are collected from the wild
3. Show the groups how to write their answers on flip chart pages under different headings as shown in Figure 3.1. If participants prefer they can draw the foods instead of writing. Allow 10 minutes.

Step 2	Participant action
Local food presentations	15 mins

1. Bring participants together and have each group present their group work.
2. After each group presents, ask the other participants if they have any questions about the presentation or any points to add. Please correct any mistakes which the participants have made.

Step 3 Discussion

Wild food

20 mins

1. After all of the presentations ask whether there are certain times of year when food is less available due to the season or lack of water. Ask whether they have to spend more money buying foods at these times of year. Ask how this affects their family's diet.
2. Ask what other crops could be planted or collected from the wild to fill in these seasonal gaps and to make sure that their families get a diverse, nutritious **diet**.
3. Ask the participants whether they think that foods collected from the wild are as nutritious as foods they buy or grow.
4. Explain that many wild foods are as nutritious and are sometimes even more nutritious than food we buy or grow. Wild foods can often survive in times of drought or other extreme weather. They do not require expensive chemicals in order to grow and often people can gather them free of charge.
5. Ask the participants what practices could reduce the amount of wild food which is available in their community.
6. Now ask what measures can be taken to protect the areas where wild foods are found and to ensure that they are available to add variety to their diets. Some examples of measures which could be taken are included in Box 3.1.
7. Finally bring together all of the important information which has been raised in the discussion and make sure that they have the correct information.

Energy-giving foods		Body-building foods	
Grown	Bought	Grown	Bought
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-

Figure 3.1 Flip chart answer sheets

To protect wild food supplies, we can:

- avoid cutting down trees unnecessarily and protect forests as much as possible
- protect the soil by leaving areas on the edge of fields covered with plants
- protect vegetation on the edges of river banks, which prevents soil erosion, also known as siltation, from blocking waterways
- protect mangroves and natural wetlands
- avoid harvesting too many wild food products at once so the plants can spread and continue to produce food

Box 3.1 Examples of some conservation measures

Step 4 Reflection

Reflect on the learning process

10 mins

1. Ask the participants what they have learnt from the session.
2. Discuss how they can increase the amount of nutritious food available to their families through home production and wild food collection.
3. Ask the participants how they are going to use this information to improve the diets of their family, encourage others in their community and protect their soil, water and natural vegetation resources.

Key Messages

- A wide range of nutritious plant and animal products from all of the food groups can be grown, produced or collected from the wild throughout the year if enough water, land, labour and other resources are made available.
- Families can grow a wider range of products in their gardens and collect food from the wild to get a more varied diet.
- Wild foods are as nutritious, and often more nutritious than food which is bought or grown.
- Wild food areas should be protected so that they can supply families with extra food especially during times when food is more expensive or less available.

Session 3.2

Local food production

Background 3.2

Improved production methods

Many agricultural practices, including cutting down trees, slash and burn agriculture and over-using chemicals can damage the soil, water and natural areas like forests, rivers and mangroves which give us nutritious food. These harmful practices can therefore threaten or diminish our ability to collect and produce food.

In addition, **unhygienic** methods of production, handling, storage, processing and consumption can lead food to be contaminated by germs, which can make us ill. Food can also be contaminated with dangerous chemicals as a result of:

- improper use of pesticides, herbicides, fertilisers and veterinary drugs
- use of contaminated water to irrigate or process food
- growing crops in soil which has been contaminated with chemicals, such as those used in mining
- use of unhealthy additives when processing food, such as pesticides to preserve fish paste

Better production methods

If we improve production methods we can have a larger quantity of higher-quality nutritious foods for the family. By protecting soil, water and forests, families can achieve higher agricultural yield while increasing the amount of wild foods available. Better production

methods include:

- ... planting many different types of crops together
- ... always following the instructions when using pesticides and other agricultural chemicals or switching to organic methods which do not require chemicals
- ... planting trees to produce fruit, nuts and other products between crops or on the edges of gardens and fields
- ... including small livestock especially chickens, ducks and fish into home production systems

Constraint	Solution
Lack of land	• Grow a few crops around your house, wherever you have space. • Grow plants in containers or bags to save space.
Lack of time to grow or process food	• Ask other family members, friends or relatives if they can help you. • Develop a roster of gardening duties for the family.
Lack of water	• Grow plants in containers or bags to save water at dry times of year. • Grow drought tolerant crops. • Grow plants in basins. • Harvest rainwater in containers. • Use mulch to cover the soil and conserve moisture.
Lack of money for things like seed, fertiliser, tools, labour or animal feed	• Save your own seeds. • Ask other people in your community if they can share some of their seeds with you. • Use manure or compost for improving the soil. • Make your own pesticides from local plants or ash. • Keep robust or resilient local animal breeds which do not need expensive feeds and can forage for food.
Lack of knowledge about what to grow and how to grow it	• Ask friends and neighbours. • Ask the local agricultural extension officer. • Ask NGO field staff in your community.
Poor soil fertility or pest and disease attack	• Improve your soil using locally made compost, manure and by planting legumes. • Make your own pesticides from local plants. • Use ash to control pests.
Over-use of pesticides or other chemicals can contaminate food	• Always follow instructions when using pesticides and other agricultural chemicals to ensure that you are not using more than you need. • Use safe, local, low input methods instead.
Livestock or wild animals will destroy my garden	• Make fences around gardens using branches and tough living plants. • Keep animals such as pigs, goats and cattle tethered and feed them crop waste. • Keep tough local breeds rather than hybrids.

Table 3.1 Some challenges to home production and potential solutions

Activity 3.2

Identifying improved production methods

Purpose

to enable the participants to:

- ... identify and use some sustainable production and processing methods
- ... identify the constraints of **home food production** and processing and suggest some solutions

Time

1 hr 25 mins

Materials

- ... flip chart
- ... permanent pens
- ... tape
- ... Visual aid 3.1

Instructions

Step 1 — Discussion

Benefits of home food production — 5 mins

1. Ask the participants how many of them have a home garden where they produce food for the family.
2. Ask why it is good to have a home garden. List the reasons on the flip chart. They may include:
   - Home gardens provide daily food for the family throughout the year.
   - They are a major source of fruit, vegetables, roots, tuber crops and some legumes.
   - Home gardens can also provide herbs, spices and fuel wood.
   - Food can be processed and stored to be eaten when there is less fresh produce available.
3. Note that all of these things can help a family to have a more diverse and nutritious diet.

Step 2 — Participant action

Constraints of home food production — 20 mins

1. Divide the participants into groups of no more than five people.
2. Ask the groups to list some challenges to home food production. Allow 10 minutes.
3. Ask one of the groups to report the challenges which they came up

with. Then ask the other participants to add any additional points which their groups came up with.

4. List the constraints on the flip chart. If not already contributed, include:

   - ... lack of land
   - ... lack of time to grow or process food
   - ... lack of water
   - ... lack of knowledge about what to grow and how to grow it
   - ... lack of money for inputs like seed, fertiliser, pesticides, tools, labour or animal feed
   - ... poor soil fertility
   - ... pest and disease attack to growing, harvested and stored food
   - ... use of chemicals can contaminate food
   - ... livestock or wild animals will destroy the garden

5. Look at the list together and ask the participants how these challenges could affect the diet and nutrition of their family.

6. Explain that later on we are going to think of some ways to address these challenges. Keep the flip chart to show them later.

Step 3 — Participant action

Solutions to the challenges — 20 mins

1. Give each group a flip chart page and permanent pen and divide up the challenges listed on the flip chart among the groups so that each group looks at two or three challenges.

2. Make sure everyone can clearly see Visual aid 3.1. Ask groups to identify any solutions in the picture to the challenges their group was given. Explain that they should also come up with any other solutions which they can think of. Allow 20 minutes.

Step 4 — Participant action

Participants present and discuss — 30 mins

1. Bring participants together and ask each group to present their group work.

2. After each group has presented, ask the other participants if they have any questions about the presentation or any points to add.

3. Table 3.1 shows some examples of challenges and solutions which can be included in the discussion. Box 3.2 gives the key to the numbers on Visual aid 3.1.

4. After the discussions ask the participants if they will now try to expand their home gardens.

Figure 3.2 / Visual aid 3.1 An improved home garden

Note that:

... in dry areas you can recommend that families plant drought tolerant crops, like cow pea, pigeon pea, roselle or amaranth and trees like moringa, palms and tamarind

... in wet areas families can grow water-loving crops, such as bananas, sweet potatoes, lotus, water cress and taro

... crops which need drained soil can be grown on mounds to improve soil drainage

1. Mixed cropping - planting many different types of nutritious crops together
2. Stacked cropping - growing plants of different heights together
3. Planting fruit and nut trees – providing food and shade on the edges of gardens and fields
4. Live fencing – using trees and plants, such as acacia, jatropha, bamboo, raphia palm, moringa, cassava and leuceana to protect gardens from livestock
5. Trellising – raising climbing plants off the ground
6. Mulching –covering the soil with organic material such as compost, grass or leaves to conserve soil moisture
7. Water-harvesting – collecting rainwater from roofs for irrigation in dry areas
8. Planting in containers – containers save space and water
9. Small livestock - rearing small livestock especially chickens and ducks
10. Organic fertiliser - using animal manure to improve the soil

Box 3.2 Methods for improved production of nutritious food (the numbers on this list refer to the numbers on Figure 3.2 / Visual aid 3.1)

Step 5 Reflection

Reflect on the learning process 10 mins

1. Ask the participants what they have learnt from the session.
2. Discuss why it is important to understand that a wide range of nutritious food can be produced in a home garden.
3. Ask the participants if they will use any of the improved agricultural methods suggested in the activity and how they plan to use them.

Key Messages

- A home garden with good production methods can contribute significantly to household nutrition security.
- Home food production is possible even when a household has few resources.
- Conservation of natural resources increases the amount of nutritious food which can be produced or collected locally by families
- Careful measures must be taken when producing food to avoid **contamination** by germs or toxic chemicals, which can make us sick.

Session 3.3

Using income to improve nutrition

Background 3.3

Improved choices when buying food

Many families, especially those who have no land or who are not farmers, depend on purchases for much of their food. When families have a low income and may already suffer from under-nutrition it is critical that they make healthy choices when buying food.

Nutrient value is a better value

Many people only think about the price of food when shopping for food but it is also important to take into account the nutrient value. Families should invest their income in nutrient-rich foods when supplementing their own production or wild food collection to ensure that they have a well-balanced and nutritious diet. Although rice is a good source of energy, it has few other **nutrients**. Therefore, it is important to supplement rice with nutrient dense fruits, vegetables and proteins that are affordable.

Food quality

The quality of the food being bought is another important consideration. Fruit, vegetables and animal products should be bought fresh. Vegetables or fruit should not have had pesticides applied to them for 1 to 2 weeks (depending on the chemical) prior to harvesting. Livestock should not have been treated with medicines of vaccines for 1 to 2 weeks prior to slaughter. Livestock products for sale must be kept cool and protected from flies.

Legumes and other grains must be clean and dry. They should be uncontaminated by insects, detectable from holes in the grain or residues, and especially by the fungus which produces the dangerous aflatoxin, which appears as mould on groundnuts and grains.

Avoid foods that do not provide nutritional value

Food from the market or shop, such as sugary or salty snacks, highly refined foods and sodas should be avoided as they contain very few nutrients and can be bad for the health when consumed in large quantities. They also cost money that could be used to purchase healthy foods in greater quantities.

Activity 3.3a

Making healthy choices when buying food

Purpose

to enable the participants to make better informed purchase choices on affordable, safe, nutritious food.

Time

1 hr 15 mins

Materials

- ... flip chart
- ... permanent pens
- ... tape
- ... copy Table 3.2 on flip chart pages ahead of time with the food categories

Instructions

Step 1 — Participant action

What do we buy? — 5 mins

1. Ask the participants to break into groups, with five or six people in each group. Hand out the food expenditure table flip chart page to each group.
2. In their groups they should think of the types of food and drink which they usually buy. Each time a food is mentioned on the list in terms of the categories shown on the table, put a tick in the appropriate place.

Step 2 — Participant action

Discuss in groups — 20 mins

1. Ask the participants to discuss the following in groups:
   - Which of these foods are the cheapest and which are the most expensive?
   - Which do they spend the most money on?
   - Which are the least nutritious foods on the list?
   - Which of the food from the three food groups (energy-giving, body-building and protective) could they substitute through more home production or wild foods?
   - On which foods should they spend more money for improved health? On which foods could they spend less money?

	Tick when participants mention a category
Energy-Giving foods	
• rice, noodles, rice flour, bread	
• potatoes, taro, cassava	
• groundnut oil, sesame oil	
Body-Building foods	
• legumes,	
• meat, poultry, offal	
• fish, shellfish, fish paste	
• milk	
• eggs	
Protective foods	
• vegetables, fruit, herbs, spices	
Unhealthy snacks	
• sugar, cakes, sweets, sweet snacks, salty snacks, sodas	
• condensed milk, tea, coffee, alcohol	

Table 3.2 Food expenditure categories

Step 3 — Participant action

Things to consider when buying food

25 mins

1. Give each group a flip chart page and ask them to brainstorm what things they should consider when buying food. Allow 10 minutes.
2. Bring the groups together and have each group present their group work.
3. After each group has presented, ask the other participants if they have any questions or any points to add.

Step 4 — Discussion

What will you buy?

15 mins

1. Ask the participants whether it is cheaper to buy food from big shops, small shops, markets or directly from farmers. What are the advantages and disadvantages of buying from these different places? During the discussion, note that transport costs need to be included if the larger shops are far from the community.
2. Remind them that foods with fewer additives are more nutritious. Examples of additives are colouring, flavouring, MSG, salt, sugar.
3. Note that sometimes more expensive foods give better value for money when they contain more nutrients.
4. Ask them which are the most nutritious kinds of food to buy. During the discussion explain that it is always good to buy meat, fish, milk, eggs, dark green leafy vegetables, yellow and orange fruits and vegetables and **iodised salt** as often as you can afford them.
5. Ask them which types of food they should avoid buying. Include:
   - ... food that is past its expiration date, damaged, dirty, old, mouldy or smells bad
   - ... meat, fish or chicken that has not been kept in a cool place or has been exposed to flies and other insects
   - ... foods that do not provide nutritional value, such as drinks and sweets containing a lot of sugar and colouring
   - ... highly refined or processed food, both of which contain few nutrients
   - ... milk formula rather than breast milk, which is best for your child
6. Note that it is often cheaper to buy things like legumes and rice in large quantities. Suggest that participants get together with a group of friends or relatives to buy easily-stored foods like these.[18]

[18] Adapted from FAO/WHO/UNU (2004)

Step 5 — Reflection

Reflect on the learning process

10 mins

1. Ask the participants what they have learnt from the session.
2. Discuss why it is important to choose the most nutritious food when shopping. Ask the participants how they will use this information when they are shopping in future.

Key Messages

- It is better to try to choose nutritious food when shopping.
- Sometimes foods which are nutritious are more expensive than others and sometimes they are less expensive than others.
- Families should avoid spending money on food which is not nutritious.
- When choosing food, avoid food which is old, contaminated or smells bad.
- If possible buy food in bulk as it may be cheaper.

Activity 3.3b

Market role play

Purpose

to enable the participants to make better informed purchase choices on affordable, safe, and nutritious food.

Time

40 mins

Materials

- flip chart
- permanent pens
- tape
- prepare six flip chart pages as shown in **Appendix 3**
- cut up some small pieces of paper to make some fake money up to a total of 5000 kyat in the following denominations: 20 x 100 kyats and 6 x500 kyats

Instructions

Step 1 — Participant action

Going to the market — 30 mins

1. Ask for two volunteers to be the main actors in a role play. Then divide the participants into six groups. Explain that the six groups are going to help to set up pretend market stalls selling different products while the two volunteers will play the part of shoppers.
2. You are going to act out a story about a young mother who is going shopping with her aunt. The mother has some money and the aunt is there to advise her on the best way to spend it to get the most nutritious food for the least cost.
3. Tell the two shoppers that one should play the young mother and the other should play the aunt.
4. Give each of the six groups a prepared flip chart page with the following headings:
   - Fruit and vegetable stall
   - Dried legumes stall
   - Meat and eggs stall
   - Fish products stall
   - Small shop selling cooking oil, rice and noodles
   - Snack shop
5. Ask the groups to write some realistic prices for the items which they are selling in the space provided on their flip chart pages. They can also add extra items to the charts if they like but they must come from the same food group as the foods already listed on their flip chart.
6. Tell each group to choose one person from their group to run the stall. The rest of the people in the groups can be the audience.

7. Arrange the shop owners at the front of the training room as if they were in a row in a market. Ask them to hold up their flip chart pages to the shoppers. Make sure the audience can all see.

8. Explain that:

    ... the stall owners should try to encourage the shoppers to buy their products by calling out to them and explaining why their products are good to buy

    ... the audience needs to try to encourage the shoppers to buy what their group is selling in terms of its value for money, nutrient value, quality, hygiene and freshness

9. Give the participant playing the young mother the 5000 kyats of fake money and explain that she and her aunt should go to each stall in turn and look at what is for sale and try to decide the best choice of foods to meet their family's needs.

10. Begin the role play.

11. After the shoppers have spent all of their money have a discussion with all of the participants about whether they made good choices or whether they could have bought other, more nutritious foods.

12. If you have time you can repeat the activity with different volunteers.

Step 2 — Reflect ion

Reflect on the learning process

10 mins

1. Ask the participants what they have learnt from the session.
2. Discuss why it is important to think carefully about what you are buying when shopping for food
3. Ask how they will use this information when they are shopping in future.

Key Messages

- It is important to choose nutritious food when shopping.
- Families should avoid spending money on food which is not nutritious.

Activity 3.3c

Food shopping quiz

Purpose

to review the information about making informed food purchase choices.

Time

50 mins

Materials

- flip chart
- permanent pens
- tape
- prepare a flip chart page ahead of time with the questions from Table 3.3
- fresh fruit as a prize for the winning team

Instructions

Step 1 — Participant action

Food shopping quiz — 40 mins

1. Divide the participants into four groups.
2. Ask group one the first question. If they get the answer correct give them two points. If it is only partly correct give them one point. If it is incorrect or they do not know the answer give the other teams a chance. The first team to raise their hand can answer. If they answer correctly they get a point. If no teams can answer correctly tell them the correct answer.
3. Ask the next question to group two. Repeat the same process as described above for them.
4. Then repeat the same process with the next question for group three, then group four, then restart with group one again, and so on.
5. Count up the points and give the winning team fresh fruit as a prize.

Step 2 — Reflection

Reflect on the learning process — 10 mins

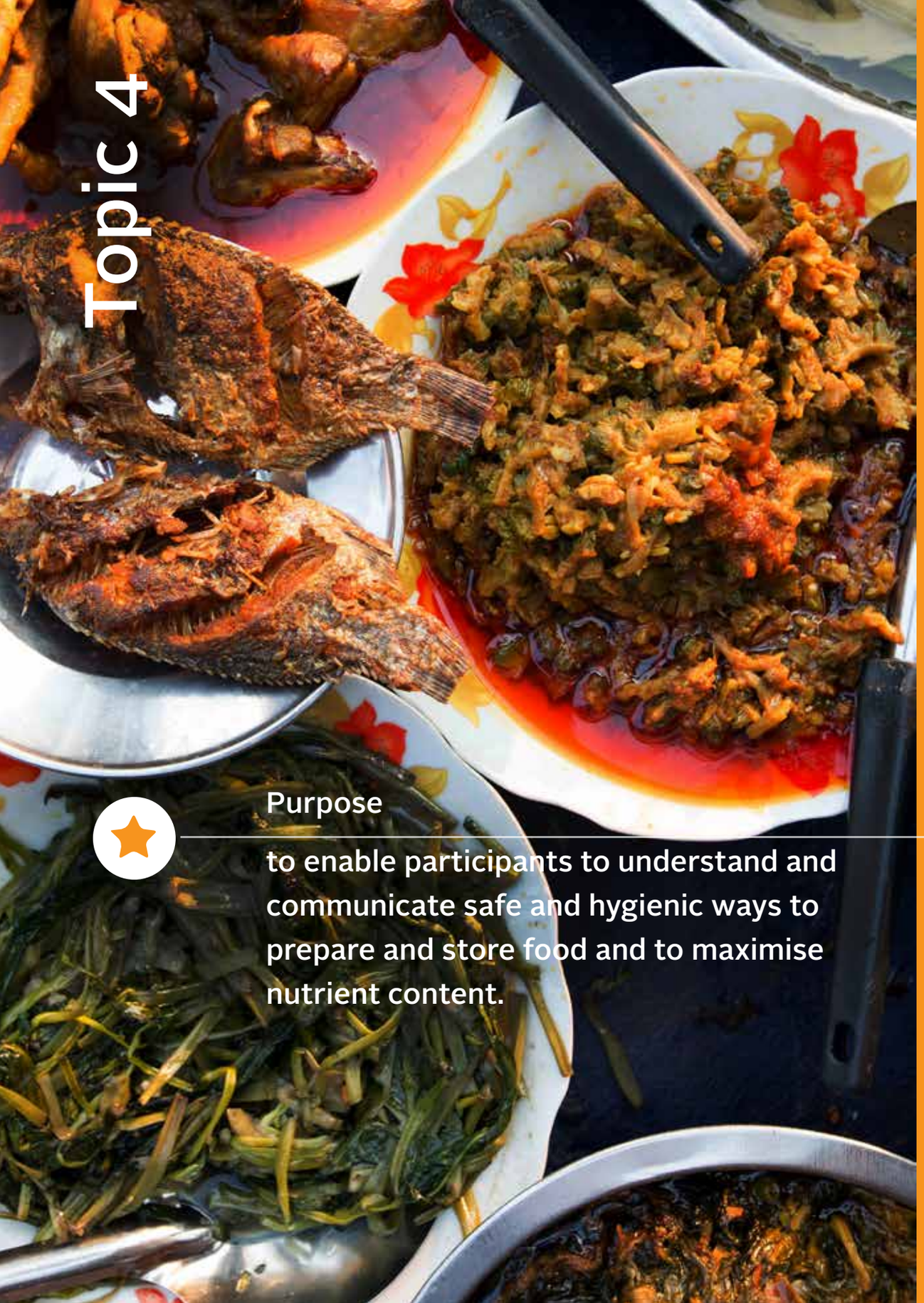
1. Ask the participants what they have learnt from the session.
2. Discuss why it is important to think carefully about what you are buying when shopping for food. Ask the participants how they will use this information when they are shopping in future.

Key Messages

- When shopping for food, make sure that foods are fresh and do not have mould.
- Think about the nutrition quality of the food you are buying. Remember that dark green leafy vegetables and yellow and orange fleshed fruits and vegetables contain large amounts of protective nutrients.

Question	Answer
What nutrient would you get more of if you choose dark green leafy vegetables such as moringa rather than cabbage or Chinese cabbage?	Dark green leafy vegetables contain more protective nutrients (such as Vitamin A and iron) than light green vegetables
What other things do you need to think about when choosing vegetables?	Are they fresh? Old wilted vegetables have lost many of their nutrients? Have they recently been sprayed with agricultural chemicals?
Which vitamin would you get lots of if you bought something yellow or orange such as papaya or pumpkin?	Vitamin A. (Remind them that Vitamin A is important for vision, development and immune function)
What energy-giving foods are for sale in the fruit and vegetable stall?	Potatoes and taro.
What would you like to know about the food at the meat stall?	Is it freshly slaughtered? Has it been kept cool? Is it protected from flies?
What would you like to know about the groundnuts at the legume stall?	Are they mouldy? Eating mouldy groundnuts can be very dangerous for your health.
Which stall does not sell any nutritious foods?	The snack stall. These foods do not give nutritional value for money and should be reserved for a special occasion.

Table 3.3 Questions and answers about shopping for food



Topic 4

Safe and nutritious food preparation

Purpose

to enable participants to understand and communicate safe and hygienic ways to prepare and store food and to maximise nutrient content.

Topic overview

Notes to facilitator

Before conducting this session, ensure the participants have covered the content from **Topic 1**, especially the food groups.

- The introduction and background sections are for you to read before the session. The activities describe what you can do with participants during the session.
- The activities are just a guide. You should adapt them to meet the needs and literacy level, cultural requirements and environment of the participants in your area.
- Use introductory exercises, ice breakers and trust building exercises to help participants to get to know one another. You can find examples in **Appendix 1**.
- Use energisers if participants seem to be getting tired. Examples also found in **Appendix 1**.
- If any participants are not able to read or write easily then use pictures as much as possible.
- Try to avoid talking too much. Keep the activities fun and active.
- Correct any incorrect opinions or information given by the participants.
- At the end of the activity reflect with the participants on what you have learnt together and review the key messages.

Introduction

Personal and **home hygiene** improvements, in association with **hygiene** behaviour change can have significant effects on a population's health and nutritional status. Food can be damaged by insects and contaminated by germs or overuse of agricultural chemicals. Damaged or contaminated food has reduced nutritional value and can make us ill. Illnesses related to poor hygiene include diarrhoea, parasitic worms and skin diseases. These types of illnesses reduce the body's ability to absorb **nutrients** leading to **under-nutrition**.

Contamination causes

Most **contamination** of food is caused by:

- ... **unhygienic** food preparation methods such as not washing hands before preparing food, cooking in a place that is not clean or using unclean utensils
- ... not protecting food from insects, rats, and domestic animals or germs
- ... drinking contaminated water or using it in food preparation
- ... not washing hands before eating,
- ... not washing hands after using the latrine
- ... not washing hands after cleaning a child's bottom

Families should practice good personal and household hygiene. Cooking and drinking water must always come from a clean, pure source and stored with a cover to prevent contaminants from getting in.

Session 4.1

Family hygiene

Background 4.1

The importance of personal hygiene

Poor **personal hygiene** is a major cause of food contamination. Many illnesses including diarrhoea and parasitic worms can be caused by contamination of food by disease-causing germs. These illnesses can cause under-nutrition in children because it makes it difficult for the body to use nutrients from food (see Session 1.1).

Personal hygiene tips

Washing your hands correctly is one of the best ways to improve personal hygiene and prevent food contamination. All family members should wash their hands properly using clean water and soap or ash, especially:

- after using the latrine
- after handling faeces such as after cleaning a child's bottom
- before and after eating and before feeding a child
- before and after handling or preparing food
- before and after caring for a sick person
- after handling soil, chemicals or domestic animals

Correct hand washing method

The correct method for washing hands is to pour clean water into the hands, then rub the hands with soap or ash including the palms, the back of the hands, the fingers, in between the fingers, the nails, the finger tips, and the wrists. Then rinse the hands with water.

Personal hygiene recommendations

Try to:

- keep fingernails short and clean
- use clean, properly constructed latrine
- put children's faeces in the latrine
- wear shoes outside to avoid becoming infected with worms

Activity 4.1

Personal hygiene

Purpose

to enable the participants to:

- ... understand the importance of personal hygiene
- ... understand how to correctly wash their hands

Time

1 hr

Materials

- ... one container of fresh, clean water
- ... a basin or a bowl
- ... a small cup for pouring water

Instructions

Step 1 — Participant action

Personal hygiene — 15 mins

1. Ask the participants if they think it is important for people to practice good hygiene and why. Write their answers on the flip chart and ensure that they include the following:
   - Poor hygiene can cause contamination by germs or poisons which can make us sick.
   - Illness, especially when diarrhoea is present, reduces the body's ability to absorb nutrients and can lead to under-nutrition.
   - Poor hygiene can reduce the nutritional content of food.
2. Divide the participants into groups of no more than five people and ask them to list ways in which we can improve our personal hygiene. Allow 10 minutes.

Step 2 — Participant action

Group presentation and discussion — 10 mins

1. Choose one group to present their answers. Ask the other groups if they have anything extra to add.
2. Discuss the responses and ensure that they include that all family members should:

- Wash their hands properly using clean water and soap or ash especially:
  - ... after using the latrine
  - ... after handling faeces, such as after cleaning a child's bottom
  - ... before and after eating
  - ... before feeding a child
  - ... before handling or preparing food
  - ... after handling raw meat, chicken or fish
  - ... after handling soil, chemicals, domestic animals
  - ... before and after caring for a sick person
- keep fingernails short and clean
- use clean, properly constructed latrines
- wear shoes outside to avoid infection with worms

Step 3 Facilitator action

Correct hand-washing method

35 mins

1. Explain that one of the best ways to prevent disease is to wash your hands properly. Ask the participants for a volunteer to come forward and demonstrate how to wash their hands using the given bowl of water and soap or ash.
2. Invite all participants to inspect how the volunteer washes their hands and to decide whether the method used is correct. You can ask another volunteer to demonstrate hand washing and ask the other participants whether this method is correct. Discuss the responses.
3. Explain that the correct way to wash hands when there is no running water is to ask someone to help you by pouring water onto your hands using a cup. Do not let the water fall back into the bucket. This avoids contamination of water in the bowl and to keeps the water clean for other uses.

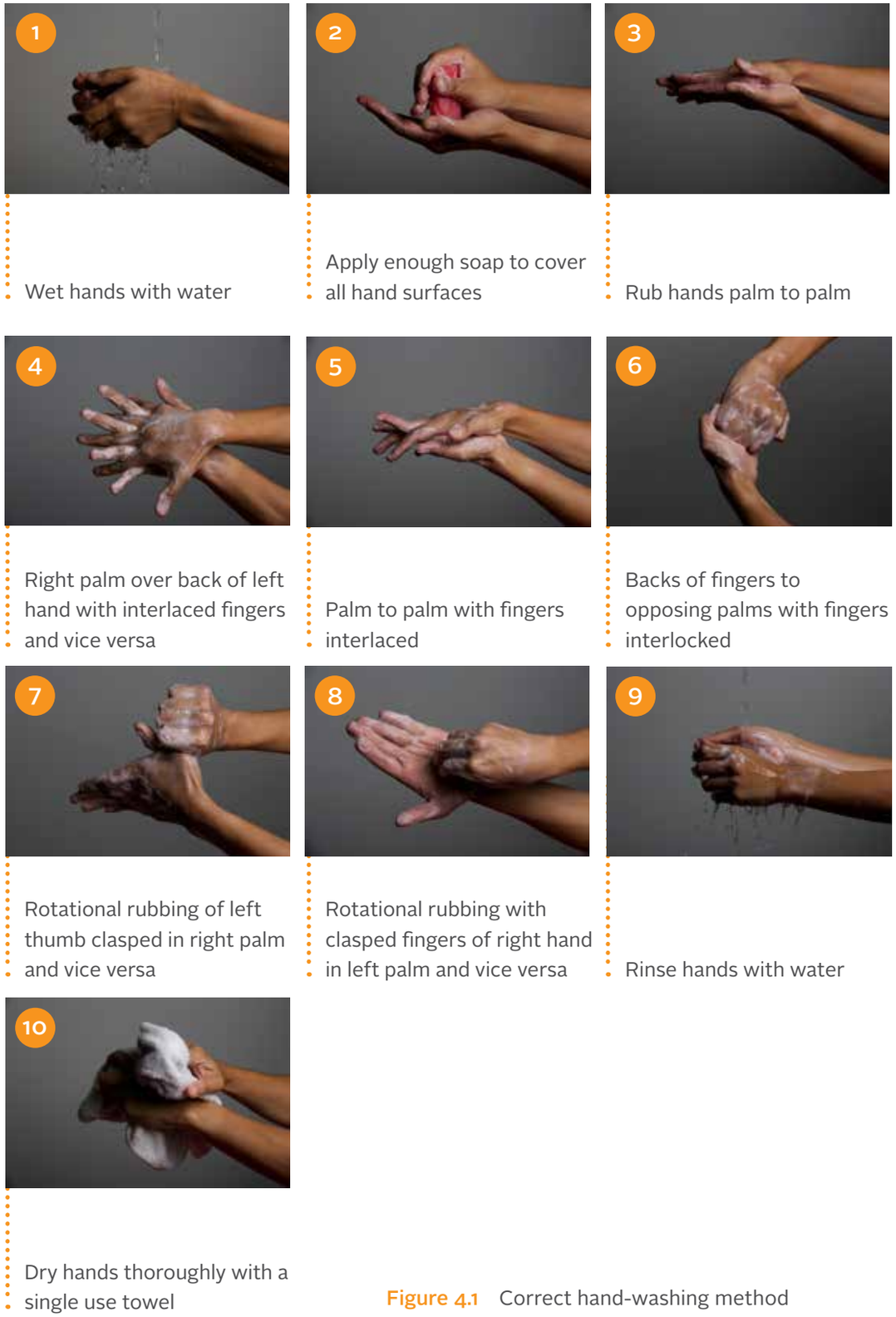


Figure 4.1 Correct hand-washing method

4. Note that although hands may look clean, they are often not actually clean. To make the hands clean, they should be washed with soap or ash and water.

5. Ask how we should wash our hands so that they are really clean? Demonstrate several steps of hand washing with soap and water using the following poem:

Pour water into the hands
Rub the hands with soap or ash
Rub the palms
Rub the back of the hands with palms
Rub the fingers
Rub the webs of the fingers
Rub the nails
Rub the tips of the fingers
Rub the wrists
Rinse with water
Wipe hands on a clean cloth, tissue or let the hands air dry
Using an unclean cloth can cause hands to become dirty again

6. Note that it is very important for parents to teach their children how to wash their hands properly.

7. Remind the participants that correct hand-washing practices will help families avoid contamination of food and water, which enters into the body and may cause illnesses, including diarrhoea, worms and skin diseases.

8. Explain that diseases and worms can lead to **malnutrition** by reducing the body's ability to absorb nutrients and sometimes making people lose their appetites so that they eat less.

Appendix 4 gives an example of how to make a 'Tippy Tap' for hand washing with locally available materials which you can demonstrate to participants if you have time.

The tippy tap is a hands free way to wash your hands that is especially appropriate for rural areas where there is no running water. It is operated by a foot lever and thus reduces the chance for bacteria transmission.

Step 4 — Reflection

Reflect on the learning process — 10 mins

1. Ask the participants what they have learnt from the session.

2. Discuss why it is important to practice good personal hygiene. Ask the participants how they will use this information in the future.

Key Messages

- All family members should :
  - ... wash their hands properly using clean water and soap or ash
  - ... when finished washing hands, wipe hands on a clean cloth or let hands air dry
  - ... use clean, properly constructed latrines
  - ... deposit children's faeces in the latrine
  - ... wear shoes outside to prevent becoming infected with worms

Session 4.2

Hygiene and the home environment

Background 4.2

Improving the home environment

Even if we practice good personal hygiene, we can still become ill if the environment in which we live is unhygienic. Babies and young children are at particular risk from an unhygienic environment and the environment in which they play must be kept clean. Remember that contamination of food and water may cause illnesses, including diarrhoea, worms and skin diseases. Diseases and worms can lead to malnutrition by reducing the body's ability to absorb nutrients and sometimes making people lose their appetites so that they eat less.

A hygienic home environment has the following characteristics:

- A clean, tidy yard where rubbish is deposited in a pit or container which is protected from children, flies and animals.
- Children are prevented from playing in unclean areas, such as near latrines, rubbish and animals, and are prevented from touching or putting unclean objects in their mouths.
- Animal manure is cleaned up and put in the latrine or compost heap.
- The latrine is well-constructed, is at least six meters away from the house and is a distance of 30 meters uphill from water sources. It is cleaned daily and always used by all family members.
- Food as well as food preparation and eating areas are kept clean and protected from insects and domestic animals.

Figure 4.2 / Visual aid 4.1 Home hygiene problems

- Fruits and vegetables are washed before they are eaten.
- Water storage containers are kept clean and covered.
- Water comes from a clean, pure source or is purified before use for drinking and preparing food.

Activity 4.2

Home hygiene

Purpose

to enable the participants to identify and implement ways to:

- ... improve the hygiene around the home environment
- ... identify clean water sources and the most effective ways to purify water

Time

1 hr 10 mins

Materials

- ... flip chart
- ... permanent pens
- ... tape
- ... Visual aid 4.1

Instructions

Step 1 — Facilitator action

What is wrong in the picture?

10 mins

1. Show the participants Visual aid 4.1 of a home showing:
   - ... chickens running around the yard where a child is crawling around
   - ... a child squatting outside the latrine while the door of the latrine is open, flies are coming out and inside the latrine is dirty
   - ... the household well is next to the latrine
   - ... rubbish flowing out of the rubbish pit and a goat eating it
   - ... a dog sniffing the plates and pots of food which are on the ground
   - ... a duck swimming in the drinking water container because the lid has been left off
2. Ask the participants what they see in the picture. Ask if any of the things they say indicates poor home hygiene. Ask them about the causes and consequences of these poor hygiene practices.

Step 2 — Participant action

Advice on better home hygiene

30 mins

1. Divide the participants into small groups.
2. Ask them to list advice for the family shown in the picture to improve the hygiene of the home environment. Allow 15 minutes.
3. Bring participants together and have each group present their group work.

Step 3 — Participant action

Home hygiene tips

10 mins

1. Ask the participants to suggest any additional tips for home hygiene which were not included in the presentations. Make sure the following are included:
    - Protect food as well as food preparation and eating areas from insects and animals and clean by washing with soap and water.
    - Store cooking and eating utensils off the ground in cupboards or on racks.
    - Dispose of all household rubbish into covered pits or bins to protect from flies and animals. Organic waste and livestock manure should be made into compost.
    - Clean up animal faeces and dispose of them in a pit away from water sources.
    - Clean latrines daily by sweeping and washing with soap and water.
    - Ensure the latrine is well-constructed and used by all family members.
    - Cover should be available for the latrine.
    - Clean and cover water storage containers.
    - Draw water from a clean, pure source or purify it before using for drinking or preparing food.
    - Keep children away from latrines, animals, rubbish and other sources of contamination
    - Dig wells at least six meters from the house and 30 meters uphill from latrines.

Step 4 — Discussion

Clean water sources and purification

10 mins

1. Ask the participants the following:
    - Where do they get their water? Do all of the community members get their water from the same source? Are the sources the same throughout the year or are some sources seasonal?
    - Do the community members think all sources of water are the same?
    - Are there any dangers of getting water from some of the sources they mentioned? What are those dangers?
2. Ask them to list some safe and unsafe sources of drinking water, making sure that the examples shown in Table 4.1 are discussed. Write their answers on the flip chart.
3. Ask the participants to explain how they could purify water if they are not confident that it comes from a clean source.

Safe sources	Unsafe sources
• Water from deep protected wells • Water which has been boiled • Water which has been purified using chlorine tablets • Water which has been purified using a ceramic filter	• Water from rivers • Water from shallow wells • Water from unprotected wells • Water stored in containers without lids • Exposed standing water, such as ponds or stagnant rain water

Table 4.1 Safe and unsafe water sources

4. Explain that the most reliable and affordable way to purify water is to boil it. Water boils at lower temperatures at higher altitudes, so you must boil it for longer to purify it if you live high up:
    - At sea level, such as the coastal and delta regions, boil water for one minute.
    - In the dry zone boil water for two minutes.
    - In the hilly zone boil water for three to four minutes.

Step 5 — Participant action

Reflect on the learning process — 10 mins

1. Ask the participants what they have learnt from the session.
2. Discuss why it is important to practice good hygiene around the home and to have clean safe water. Ask the participants how they will use this information in their homes.

Key Messages

- Only drink water from safe sources.
- We must ensure that our home environment is hygienic to protect ourselves from disease. Protecting ourselves from disease will reduce the chances of our family members, especially our children, becoming ill and malnourished.

Session 4.3

Food Preparation

Background 4.3

Food preparation with hygiene and nutrients in mind

One of the times when food is most likely to be contaminated with germs is when it is being prepared. Correct food preparation can also help to conserve the nutrients in food.

The food preparation environment

Take great care to ensure that the food preparation environment and the eating place are kept clean. Use soap and water to clean all cooking surfaces, cloths and utensils like knives, boards, cloths, plates, and pots and dry them with a clean cloth.

Personal hygiene when preparing and eating food

Practice strict personal hygiene when preparing, serving and eating food. Family members should:

- wash their hands with soap or ash and water and dry them with a clean towel before preparing food
- tie back or cover long hair with a clean scarf
- keep finger nails short and clean them with soap
- cover all wounds or sores with a clean cloth before preparing food

- ... always wash hands with hot water and soap after touching raw meat, offal, poultry and fish to prevent the spread of germs

Avoid:

- ... drinking, smoking or eating while preparing food
- ... handling food when ill
- ... sneezing, coughing or spitting near food
- ... scratching the skin when preparing or eating food

Healthy, hygienic cooking methods

Use different methods for hygiene and nutrient conservation, depending on the food product being prepared.

Animal products

Raw meat, offal, poultry and fish often contain many germs. In addition to washing hands, any equipment, utensils or surfaces that touch these foods must be thoroughly washed in hot water with soap after use and before use with other food products. These foods must be stored in a cool place and protected from flies. Meat must be thoroughly cooked. When reheating meat, heat it to boiling point.

Vegetables and fruit

Buy or harvest fruit and vegetables on the day when they are going to be cooked and eaten. Don’t buy or harvest fruit or vegetables that have had pesticides applied in the past one or two weeks (depending on the chemical). Many types of fruit and vegetables can be eaten raw for maximum absorption of nutrients. Before cutting or eating raw fruit and vegetables, ensure that they are thoroughly washed with clean water.

When cooking vegetables try to avoid:

- ... washing in unpurified water
- ... washing after cutting
- ... cooking in large amounts of water
- ... overcooking vegetables so that they turn brown

A healthy way to cook vegetables is to steam or stir fry them with the lid on the cooking pot to avoid loss of nutrients. Adding a little oil and lemon juice improves the body's ability to absorb some of the nutrients in the food.

Rice

Gently wash rice in clean water before cooking. Don't wash it more than twice or rub during washing as important nutrients can be lost this way. Steaming is a better method of cooking rice than boiling rice, as the cooking liquid, or congee, does not need to be poured off. When boiled, rice releases nutrients into the water and pouring this water off results in the loss of these nutrients.

Legumes

Soak dried beans overnight in clean water before cooking. Throw away the soaking water and use clean water for cooking. This helps the beans to cook more quickly and helps prevent gas in the stomach.

Tips for food consumption

Protect cooked food from insects, animals and dust. When reheating food, bring it to boiling point and make sure it is heated to the middle of the food. Observe the following:[19]

[19] Action Contre la Faim (2014)

- All family members should wash their hands before and after eating.
- Avoid drinking tea or coffee or eating pickled tea-leaf snack for one hour before or after a meal as this prevents the absorption of iron from food. Iron, which is important for healthy blood, proper functioning of muscles and the brain and can be found in many foods. Some of these include beef, chicken, fish, eggs and dark green leafy vegetables.
- Eat fruit and vegetables that are rich in vitamin C, such as tomatoes, lemon, lime, guava or papaya during or immediately after a meal, as this helps the body use iron.

Activity 4.3a

Food hygiene and cooking story

Purpose

to enable the participants to identify and implement ways to handle, store and prepare food hygienically and to maximise nutrients

Time

1 hr 10 mins

Materials

- ... flip chart
- ... copies of the story
- ... permanent pens
- ... tape

As facilitator be sure to prepare early for this activity by reading the story ahead of time.

Instructions

Step 1 — Participant action

Ma Shwe Mra Thein cooks a meal — 30 mins

1. Ask the participants to listen carefully to the story which you are going to read. Tell them to raise their hands and call “stop” when someone in the story does something that is not right. Whenever a participant raises their hand, stop reading, and ask them to explain what is wrong.
2. Start reading the story when everyone is ready. Read slowly.

Script: Story of Ma Shwe Mra Thein cooks a meal

The rain had stopped and it was a bright day. Ma Shwe Mra Thein returned from her garden with a basket full of freshly picked vegetables. Next to her was her son, Aung Mra, who proudly carried a large gourd. “Let’s us go home and cook a lovely meal!” she said.

In the kitchen, a chicken was pecking around her pot and she shooed it out of the way. She set down the basket and took the gourd from Aung Mra. “Let’s cut it up”, she said to him and took her knife and began to cut it into slices. Aung Mra picked up a slice and admired it: “It’s so big!” he said, and he sniffed it and (looking furtively at his mother) gave it a quick lick – and put it back. She put the slices into a bowl and set it aside next to her on the ground.

She picked up the rice pot stained with the left-over rice and rinsed with water and poured out. She put some rice and water into the cooking pot and vigorously washed the rice with water. She poured out the washing water and poured more water into

the pot and washed again and again to make the rice clean and white. When the rice became very clean, she measured some water into the pot and put the rice pot on the fire.

Then she took some onions from the basket. As she cut the onions, they tickled her nose and she began to sneeze: Hatschi! She laughed and quickly wiped her nose with a corner of her blouse.

Aung Mra was hungry; he didn't want to wait until the cooking was done so Ma Shwe Mra Thein said he could have some left-over rice: "It's over there in the bowl with a fan on it", she said and pointed. Aung Mra took a spoon from the pot on the ground and greedily dipped into the bowl and began to eat.

Ma Shwe Mra Thein fried the onions and meanwhile cut up some eggplant which she then washed with water– she would make a tasty curry and add the vegetables from the night before and some monosodium glutamate powder. Already, the scent of the onions frying filled the kitchen: Hmm, It smelled good! Aung Mra had finished; he had made a bit of a mess and she quickly wiped his face with the corner of her shirt.

She pulled the pot with the curry from the fire and put it aside for later. Wondering if there was enough drinking water, she looked inside the aluminium jar: the level was low. She would have to get some more from the pond.

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3. After reading through the story, ask the participants to discuss what Ma Shwe Mra Thein should have done when she prepared and stored the food to ensure that:

   ... it would be clean and safe to eat
   ... the food would have maximum nutrient content

4. After reading you may distribute copies of the story if this is suitable.

Step 2 — Participant action

Food hygiene tips — 15 mins

1. Ask the participants to divide into small groups of no more than 5 people.
2. Give each group a flip chart page and ask them to come up with some general tips for good hygiene when preparing food. Allow 15 minutes.

Step 3 — Participant action

Food hygiene — 15 mins

1. Bring participants together and ask each group to present one different hygiene tip.
2. Discuss each tip as it is presented and write it on the flip chart.
3. Continue by asking each group to present another tip until all of the tips which the groups came up with have been mentioned. When discussing the tips make sure that all of the following are included:

   - Wash hands with soap or ash and clean water before touching food.
   - Wash all foods to be eaten raw in clean water before eating.
   - Wash vegetables before cutting them up.
   - Store food in clean containers.
   - Cover food to avoid contamination by flies and other vermin.
   - Cook fresh meat, fish and poultry thoroughly so that all germs are killed.
   - Re-cook foods left over from an earlier meal to boiling point before eating.

- Use clean and safe water to prepare foods.
- Use clean containers and utensils for preparing food.
- Store containers and cooking pots off the ground to avoid soiling.
- Cover the nose and mouth when sneezing or coughing near food.

4. Note that vegetables and rice can easily lose nutrients during preparation and cooking. Ask the participants if they know of any ways of cooking vegetables and rice which can help to retain the nutrients. Write their suggestions on the flip chart and ensure that the following are included:

   - Do not wash rice forcefully and repeatedly because vitamin B1 is then lost.
   - Vegetables should be washed before cutting them up. Vitamins will be lost if vegetables are washed after they are cut.
   - Avoid cooking vegetables or rice in large amounts of water which needs to be thrown away. The nutrients will be thrown away with the water. If you happen to have extra water, you can add it to your curry. For vegetables, steaming is a better method to preserve nutrients.
   - Cut vegetables into larger pieces to help conserve nutrients
   - Keep the lid on the pot when steaming vegetables to prevent the nutrients from escaping
   - Do not over-cook vegetables as this causes loss of nutrients.

Step 4 — Reflection

Reflect on the learning process — 10 mins

1. Ask the participants what they have learnt from the session.

2. Discuss why it is important to practice good hygiene when preparing food. Why is it important to use cooking methods which retain nutrients?
3. Ask the participants how they will use this information when preparing food for their families.

Key Messages

- Use healthy and hygienic preparation and cooking methods to maximise nutrients in food and protect food from germs and other contaminants.
- Take great care to ensure that the food preparation environment and the eating place are kept clean.
- Practice strict personal hygiene when preparing, serving and eating food.

Activity 4.3b

Food hygiene and cooking quiz

Purpose

to enable the participants to identify and implement ways to handle, store and prepare food hygienically and to maximise nutrients

Time

50 mins

Materials

- flip chart
- food hygiene quiz questions and answers
- permanent pens
- tape

Instructions

Step 1	Participant action
Food hygiene quiz	40 mins

1. Explain that participants are going to play a game to discuss how we can keep our food clean and how we can get the most **vitamins and minerals** from our food.
2. There will be two teams and each time a team answers correctly they will score a point. If one team cannot answer a question, the other team will get a chance to answer and score the point.
3. Please see **Table 4.2** for questions and answers. If no one can answer the question, provide the correct answer.
4. Divide participants into team A and team B.
5. Ask alternating questions to team A and team B.
6. Give the team which gives the correct answer a point.
7. After each answer, have a brief discussion to ensure all participants understand the answer.
8. At the end of the activity congratulate the winning team.

Questions	Answers
What is a healthy alternative to boiling vegetables?	Steaming vegetables. When you boil vegetables and throw excess water out, you throw all the nutrients away with the water.
What happens if you cook green leafy vegetables until they become soft and brown?	When you overcook vegetables you destroy some of the vitamins and iron.
What happens if you leave the lid off the pot when you boil the vegetables?	You allow some nutrients to escape.
What happens if you throw out the water used to boil rice after the rice is cooked?	You throw away important nutrients.
What is the best way to cut up vegetables for cooking?	Cut them into big pieces to avoid loss of nutrients.
What happens if you wash the vegetables after cutting?	You wash away some of the nutrients.
What happens if you do not wash fresh food and vegetables before eating?	You may get infected with germs and worms that are on the outside of the fruits or vegetables.
Why should you eat food fresh, as soon as you have cooked it?	If you leave cooked food standing around for too long the food begins to spoil and can make you sick.

Questions	Answers
How do you store food to protect it from harmful organisms?	You cover it up so that flies, insects, rodents and germs cannot get at it. Also, do not leave it on the floor.
What might happen if you do not re-cook food from an earlier meal before eating it?	You may become ill because harmful organisms have grown on it. Remember that if you eat food from an earlier meal it should be heated to boiling point to kill any germs.
What could you add to curry and soup to make it more nutritious?	By adding beans or meat or pieces of green leafy vegetables or eggs. You can also add the cooking water from rice or beans to it.
What may happen if you keep uncooked meat or fish next to cooked food?	Raw meat, poultry and fish has germs on it which can contaminate cooked food. Clean anything (including hands, utensils, table) that has touched raw meat or fish before using it to prepare other foods.
How do you know when food has gone bad?	It smells strongly or looks mouldy, so throw it out!

Table 4.2 Food hygiene quiz questions and answers

Step 2 Reflection

Reflect on the learning process

10 mins

1. Ask the participants what they have learnt from the session.
2. Discuss why it is important to practice good hygiene when preparing food. Why is it important to use cooking methods which retain nutrients?
3. Ask them how they will use this information when preparing food for their families.

Key Messages

- Incorrect food storage, handling and preparation methods can lead to a loss of nutrients from food.
- Use healthy and hygienic preparation and cooking methods to protect food from germs.

Cooking competition

Purpose

to enable the participants to apply their learning on hygiene, food preparation for infants and nutrient retention while cooking in a fun and relaxed atmosphere.

Time

2 hrs and 25 mins, (20 minutes on the day of preparation and 2 hr and 25 mins on the day of activity)

Materials

- food items to be cooked, including cooking oil and condiments
- cooking pots, utensils, bowls, plates and spoons
- lids or cloths for covering the food to protect it from flies
- potable water
- soap
- four stoves or cooking fires
- score card for judges
- small prizes or awards for the winners, such as additional food, a food voucher from a local vendor, a set of cooking pots or bowls and soap, or nets that protect food from flies.

Instructions

This activity requires preparation the day before. Make sure you allow time for this when planning the activity.

Day before cooking activity	Discussion
Preparation and Instruction	40 mins

1. Divide the participants into two teams.
2. Explain that the competition is to prepare the best meal for two families of two adults and a child. Team One must prepare their meal for a family with a seven month-old child, and Team Two must prepare their meals for a family with a ten month-old child.
3. Each team must decide on recipes for their meal, and enough ingredients must be bought for each team to cook a full meal. Discuss recipe options with the participants. Ask them what they would like to cook. Encourage them to include a variety of nutritious foods such as meat, offal, vegetables (including dark green or orange ones), beans and others.
4. Explain that they should adapt part of each meal for the child. Each team will make enough food for the adults and the child, all based on the same set of ingredients.
5. Make sure the foods are suitable for children (i.e. no choking hazards). Encourage the choice of local foods which are easy to access and are not too expensive.
6. Set a price limit for each meal and give this amount to each team to buy the ingredients. Alternatively, ask for each participant to contribute one or two ingredients for the meal.

Ideally there should be more than one judge, but not more than three, who have the knowledge to be able to judge on the various criteria. Also, the judges should be of mixed gender. The final score for each group should be a summation of scores by all judges.

7. Prepare all the materials needed for cooking prior to the day of the cooking competition.
8. During presentation and judging the food needs to be covered to protect it from flies.

Day of Activity (2 hours and 15 minutes)

Step 1 — Presentation

Introduction — 10 mins

1. Give the following instructions: The two teams are going to participate in a cooking competition for a family with one infant. Team One is going to cook for a couple with a seven month-old child and the Team Two is going to cook for a couple with a ten month-old child. The recipes should be the ones which were agreed by each team the day before.
2. Explain that the competition will be judged on the following criteria, which you should write down on a flip chart page:
   - How well the team practiced good personal and food hygiene behaviours
   - How well the cooking methods preserve nutrients
   - How suitable the child's meal is, in terms of texture and diversity
   - How balanced the meal is for the adults

Criteria	Score (maximum five points each)	Judge's comments
Personal Hygiene: all the group participants wash their hands with soap properly before handling food items for cooking (See Topic 4)		
Food Hygiene: proper washing and cleaning methods for food items and cleaning utensils (See Topic 4)		
Food preparation methods: techniques to maximise nutrient contents are used (See Topic 4)		
Suitability of food for the infant, in terms of texture and diversity (See Topic 2)		
Balanced meal for the adult (See Topic 1 and Topic 2)		
Taste		
Presentation of the group (three minutes)		
Timing: finishing within the allowed time		
Total (out of 40)		

Table 4.3 Score criteria for cooking competition

It is important to make the atmosphere lively and fun. Throughout the competition the facilitator should be roving from team to team asking questions that will facilitate learning, such as: How long are you boiling the greens? What will you do with the water after you have finished? How many times did you rinse the rice? Questions that will elicit thoughtful responses from the participants and are in line with key messages and judging criteria.

- How good it tastes
- How well the team presented their meal in the three minute presentation
- Timeliness of the meal (it is ready on time)

3. The teams should also keep in mind the scoring criteria and should follow the guidance reviewed during previous sessions, including feeding for children from 6 to 23 months old, **balanced diet**, hygiene and maximizing nutrient content during food preparation and handling.

4. The teams will have 90 minutes to prepare and cook their meals. Once the time is up, each team will have three minutes to make a presentation on what they have cooked and will receive feedback from the other participants.
5. Ask the participants if the instructions are clear and whether there are any questions.

Step 2 — Presentation

Cooking — 90 mins

1. If all the participants are ready, begin the competition.
2. Give each judge a piece of paper with a scorecard on it. An example is shown in Table 4.3. They will score each criteria out of five for each team.
3. During the preparation and cooking process, judges should observe the hygiene and the food preparation methods used and note down points for feedback to the participants after the meals are prepared.
4. Give the teams a warning when they have only 10 minutes left for cooking.

Step 3 — Participant action

Presentation, feedback and scoring — 35 mins

1. Once the time is up, encourage each team to make a presentation on what they have cooked. Each team should get three minutes for their presentation. After each presentation, the rest of the participants should be allowed about three minutes for feedback to the presenting team. During presentation and judging the food needs to be covered to protect it from flies.
2. After the presentations and feedback, the judges should taste the food which each team has prepared.
3. After tasting, the judges meet to discuss their scores. The final score for each team should be the total of scores by all judges.
4. Judges should announce the scores as well as feedback for the teams. If prizes have been prepared, they can then be distributed.

Step 4 — Reflect

Reflect on the learning process — 10 mins

1. Ask the participants what they have learnt from the session:
   - Why is it important to practice good hygiene when preparing food?
   - Why is it important to use cooking methods which retain nutrients?
   - Why is it important to prepare the right kind of food for children of different ages? What are the different requirements of children from 6 to 8 months old and from 9 to 11 months old?
   - What makes a meal balanced?
2. Ask the participants how they will use this information when preparing food for their families.

Key Messages

- Practice good hygiene when preparing and serving food.
- Infants can eat **family foods** as long as they are the appropriate texture for the age of the child.
- Be careful when cooking to maximise nutrients in food.
- Ask participants about the cost of the meal – was it any different from what they normally spend on their family meals? What do the participants think about cost, affordability and nutrition?

Appendices

Overview

Appendix 1

Introductory exercises, icebreakers and energisers

Introductory exercises and icebreakers[20]

The following games can be used to help participants get to know one another and trust one another.

Introductory exercise and icebreaker

Gesture with your name

This is a good activity to help participants get to know each other's names at the beginning of a workshop:

1. Ask participants to sit or stand in a circle.
2. Explain that each person must say their name and then perform a gesture which they feel expresses something unique about them.
3. Demonstrate a couple of gestures yourself such as reaching out your arms, hiding your face behind your hands (to represent shyness, for example), bowing (to represent politeness) or kicking a pretend ball (to represent interest in football).
4. Explain that after each introduction the next participant should introduce him or herself and then all the participants who went before him or her, including each participant's name and gesture saying "this is..." repeating the name and gesture.
5. For each introduction, participants should say "hello..." and perform the name and gesture of the participant they are meeting, Participants then take turns to introduce themselves this way.

[20] Leupold (2007)

Introductory exercise and icebreaker

Animal drawing

This activity helps people introduce themselves and understand something about each participant's personality:

1. Give each participant a piece of paper and ask them to draw any animal which they feel represents their personality. For example, if they are a quiet person they should draw a quiet animal. If they are a very strong person they should draw an animal which they feel symbolises this strength.
2. Ask one person to show their drawing and ask others to say what it is.
3. Get the participant to explain why this animal represents them.
4. Ask the next person to show their picture.

Introductory exercise and icebreaker

Stand up if this applies to you

This is a good activity to help participants get to know each other:

1. Start with participants sitting
2. Ask participants to stand if a statement applies to them. For example:
   - ... "Stand if you were born within 50km of this place."
   - ... "Stand if you watch football"
   - ... "Stand if you have children"
   - ... "Stand if you enjoy listening to music"
   - ... "Stand if you like eating okra"
3. Ask participants to sit down after each statement.
4. Think of funny statements but be careful not to embarrass participants or make them feel uncomfortable.

Energisers

Below are some activities and games that get people moving around when they are feeling tired.

Energiser

Going on a journey

Participants form groups and pretend they are moving together in a vehicle:

1. Participants walk around, freely. Explain that everyone is going on a journey; however, the vehicles are not big enough to hold everyone. Sometimes they are small, sometimes they are bigger. Explain that you will call out a number and participants have to get into groups of that number.
2. Call out a number, for example “five!” Wait for groups of five to be established.
3. Ask everyone in a group to stand close together as if they were sitting in a vehicle.
4. Describe the road and ask participants to respond. For example, say “the road is bumpy!” (everyone should jump up and down), or “There is a sharp bend to the left!” (everyone should bend left). Finally say: “You have arrived”, and everyone moves away from the group and walks around freely, until you call the next number.
5. Stop the game after about three vehicles, and thank the players!

If your next activity is a group activity, you could use this game as a way of getting participants into the right sized groups!

Energiser

Line-ups

Participants arrange themselves in a long line, following a description:

1. Participants stand around, freely. Explain that you will give a description and participants should form a long line according to the description. For example:
    - Line up from tallest to shortest person: point out which end is the tallest and which is the shortest.
    - Line up according to their birth date: on one side the earliest birthday in the year and on the other side the latest birthday in the year.
    - Line up according to the distance between the workshop or meeting place and participants' homes.
    - Line up according to the number of people living in the household.
2. When everyone is in place ask them to greet their neighbours to the left and right.
3. Choose another description, and ask participants to line up according to that one.
4. Continue until participants have changed neighbours a few times.
5. Thank the players and review what happened.

Energiser

Who is the leader?

Participants imitate the movements of a leader and someone guesses who the leader is:

1. Ask all participants to sit or stand in a circle.
2. Explain the game. The leader will begin a repetitive movement and everyone in the circle quickly imitates the movement. The leader then chooses another movement and again everyone imitates. For example, the leader puts their hands on their head – and all the others copy the movement; the leader then waves their arms and all the others copy the movement and so on. The guesser will have three opportunities to guess who the leader is. If they guess correctly they can choose the next guesser. Point out that the players should not look at the leader too obviously otherwise it is too easy for the guesser.

You could use the long line in the line-ups energiser to divide participants up into groups, just cut the line into the right size groups.

3. Ask for a volunteer to be the guesser – ask her or him to close their eyes while you select a leader by pointing at her or him.
4. Begin the game: invite the guesser to stand in the circle and the players to start moving.
5. Ensure different people have a turn at being leader or guesser.
6. End the game after at least three changes in leader and guesser. Thank the players.

Energiser

Gentle rain

Participants stand in pairs, facing each other, and take turns imitating each other:

1. Ask all participants to follow what you do. Tap the palm of one hand with one finger of the other hand, then two fingers, then three, then four and finally the whole hand then back again four, three, two, one.
2. Thank the players.

Energiser

Touch blue

Participants move around as quickly as possible, following directions given by the facilitator:

1. Participants find a space to stand freely.
2. Explain the game: you will give directions, such as “touch blue”, or “touch grass” or “touch chair” and participants move quickly to touch anything that is blue or made of grass, or the chair or anything else that follows the word “touch”.
3. Play the game. Give new directions quickly so that participants stay on the move.
4. Stop when all participants seem energised and thank them for playing.
5. Vary the energiser by having the last person to follow the instruction introduce the new one.

When people have moved to different destinations and stand in groups you could end the game and ask them to stay in those groups for the next activity.

Energiser

Hot potato

Participants have to be alert as they pass or throw an object:

1. Participants stand or sit in a circle.
2. Explain the game: you will begin to pass an object such as a small ball or knotted piece of cloth to the participant next to you and

they will pass it on to the next as fast as they can. When you shout “hot potato!” the participant holding the object quickly throws it to someone across the space who tries to catch it and begins to pass it along, again. The more often you shout “hot potato” the more excited and alert participants will have to be.

3. Play until all are alert and thank them.

If working with a large group you may want to use two or more ‘hot potatoes’.

Energiser

Mirrors

Participants stand in pairs, facing each other, and take turns imitating each other:

1. Ask participants to find a partner and face each other.
2. Explain the game: one partner will be a person in front of a mirror, the other will be the mirror image. When the person moves, the mirror image has to make the same movement, as a reflection. Slow movements are easier to follow.
3. Start the game; after a while, ask partners to swap over, so the person in front of the mirror becomes the reflection, and vice versa.
4. Vary the energiser by giving participants a theme that helps them to think of movements – for example: dancing, getting dressed, or preparing a meal.
5. Thank the players.

Energiser

Animals in the forest

A game that wakes everyone up by getting them on their feet:

1. Ask all participants to stand in a circle.
2. Explain the game: we pretend to walk through the forest or field and on the way we meet different animals. Example: we meet a large bird (shriek and 'flap' your arms), or a rodent (look left and right very quickly and run on the spot).
3. Ask for a volunteer to begin. Give them the name of an animal found locally or let them choose their own and act it out – followed by everyone else in the circle.
4. Thank players and review the game by discussing the useful or harmful role of local animals and insects.

A variation is to invent your own actions and sounds to fit local conditions. Tell a story and in the story you encounter different animals – as you name them participants must respond with the actions and sounds of the animals. As some people get it wrong it creates a lot of laughter!

Energiser

Fox and rabbit

An energetic game where the "fox" has to chase the "rabbit":

1. Tell the participants to stand in a circle.
2. Explain the game: One object, like a marker pen represents the fox, which is a quicker runner than the rabbit. A second object, like a roll of tape represents the rabbit. As the game starts, the "rabbit" has to be passed from one participant to the next along the circle. Before passing, each participant has to circle "rabbit" around their waist twice. In the same way, the "fox" has to be passed from one participant to the next along the circle following the "rabbit". Unlike the "rabbit", the "fox" only has to be circled around the waist of each participant once. Sooner or later, the object that represents the fox will "catch" the object that represents the rabbit by ending up in the hands of the same person. That person will be "out".
3. Conduct a practice round to make sure everyone understands the game.
4. The game can continue until several people are out and the rest of the group can decide what they would like these people to do such as sing a song or dance.

Clap slap

Participants build up and maintain a rhythmic pattern of clapping and slapping:

1. Participants stand in two circles, one inside the other. Players on the inside circle face outwards. Players in the outside circle take a small step to the left so they come to stand opposite the gap between two players on the inside circle.
2. Ask all players in the outside circle to lift their right hands and then take the right hand of one of the players standing opposite them to the right, in the inside circle. Ask players on the inside circle to lift their left hands and then take the left hand of the other player standing diagonally opposite them. You should have all players holding one hand of the player opposite to the right, and one hand of the player opposite to the left. Check and assist where necessary.
3. Explain that the object of the game is to clap slap a rhythmic pattern all together and using the hands of two players instead of one.
4. Demonstrate a simple pattern and ask participants to follow. For example, begin by clapping your hands together, then slap the opposite hands, clap, slap your thighs, and begin again. Repeat until all the players clap-slap together!
5. As participants become more confident you can change the pattern and go faster.

Appendix 2

Some important vitamins and minerals

Protective nutrient	Function	Symptoms of deficiency	Examples of food sources
Vitamin A	Important for vision, growth and development, immune function and reproduction	Night blindness, spots, patches and sores on the eyes. People get sick more often and have more serious symptoms when they are ill.	Egg, liver, dark green leafy vegetables, pumpkin, ripe mango and papaya
Vitamin B1	Important for nerve function	Loss of appetite, severe weakness especially in the legs	Beans/lentils, tofu, groundnut, pork, fresh fish, moringa and other vegetables
Vitamin C	Important for immune function and healing of wounds	Scurvy, which can include bleeding gums and joint pain	Lemon, lime, guava, bitter gourd, tomato, moringa, ripe mango, ripe papaya and other fruits and vegetables
Iron	Important for delivering oxygen to different cells in the body and for proper functioning of muscles and the brain	Pale tongue and inside lips, tiredness, dizziness, breathlessness	Beef, chicken, liver, egg, dark green leafy vegetables, beans/ lentils, tofu, fresh & dried fish, groundnut
Iodine	Important for hormones produced by thyroid gland, and for mental development of children.	Goiter, feeling cold, lacking energy, feeling sleepy, dry skin	Iodised salt, sea fish, shell fish, seaweed

Appendix 3

Flip chart pages for Activity 3.3b

Fruit and vegetable stall

Item	Kyats
Moringa leaves (per bunch)	
Chinese cabbage (whole)	
Cabbage (whole)	
Water cress (per bunch)	
Pumpkin (half)	
Watermelon (whole)	
Papaya (whole)	
Taro (pile)	
Potatoes (pile)	

Dried legumes stall

Item	Kyats
Cowpeas (per cup)	
Chick peas (per cup)	
Pigeon pea (per cup)	
Ground nuts (per cup)	
Green gram (per cup)	
Bean curd (per packet)	

Fish and fish products stall

Item	Kyats
Dried sea fish	
Dried prawn	
Fresh small river fish	
Fish paste	

Meat, chicken and eggs stall

Item	Kyats
Chicken (whole)	
Duck (whole)	
Chicken eggs	
Quail eggs	

Small shop selling rice and cooking oil

Item	Kyats
Polished rice (per cup)	
Noodles (per packet)	
Black sticky rice (per cup)	
Cooking oil (500ml bottle)	
Cooking oil (1L bottle)	

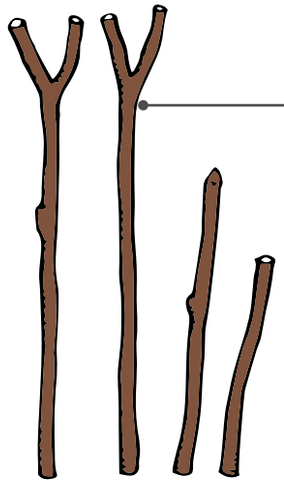
Small shop selling snacks

Item	Kyats
Salty corn snacks (packet)	
Small cakes (for 2)	
Sweets (packet)	
Soda (750ml can)	
Jaggery snack	

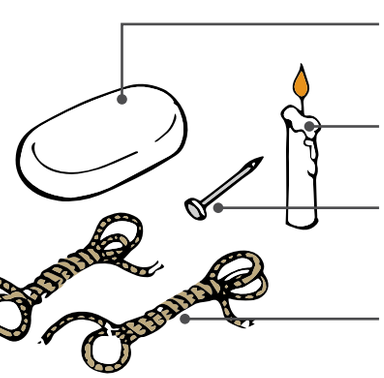
Appendix 4

How to build a tippy tap[21]

Tools



6½ feet forked sticks x 2
3¼ feet straight sticks x 2



Soap

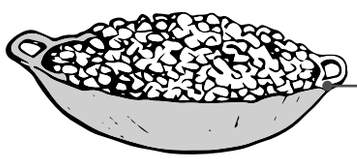
Candle

Nail

2 pieces of string

Tools to dig

Water container



Gravel

[21] Adapted from Tippy Tap (2015)

1

Dig two holes 18in deep and about 2 ft apart

2

Place the forked sticks, ensure they are level

3

Fill holes with soil & rocks, and pack tightly

4

Heat the nail and make holes in the water container

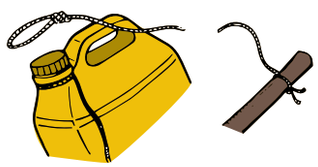
5

Make a hole in the soap and thread string

6

Hang container and soap on cross stick and place on supports

7



Fill container with water and attach string. Attach other end of string to foot lever stick

8

Make gravel basin between sticks to prevent muddy area

Appendix 5

Daily Human Requirements of select nutrients[22]

Micronutrient values are based on Recommended Nutrient Intakes (RNI)

		Vitamin A[b]	Vitamin B1 (Thiamin)	Vitamin C	Calcium	Iron	Body Weight	Energy [g]	Protein
		µg RAEc/day	mg/day	mg/day	mg/day	mg/day	Kg	kcals/day	g/day
Children	6-<12 months old	500	0.3	3	400	9	8.9	708	14.1
	1-6 years old	300-400	0.5-0.6	30	500-600	6	12.1-18.2	1,022-1,352	14-22.2
Adolescents	10-18 years old (F)	600-700[d]	1.1	40	1300	14 or 32[e]	46.7	2,326	42.6
	10-18 years old (M)	600-900[d]	1.2	40	1300	17	49.7	2,824	47.8
Adults	19-<65 years old (F)	700	1.1	45	1000-1300	29 or 11[f]	55	2,408	41
	19-<65 years old (M)	900	1.2	45	1000	14	65	3,091	12.93
	65+ years old (F)	700	1.1	45	1300	11	55	2,142	41
	65+ years old (M)	900	1.2	45	1300	14	65	2,496	49
Pregnant	Pregnancy	750-770	1.4	55	1200 (3rd Trimester)	Iron supplementation recommended	55	+278	+6
Lactating	0-12 months old	1200-1300	1.5	70	1000	15	55	+278	+17.5

[a] RNI is the daily intake which meets the nutrient requirements of almost all (97.5%) apparently healthy individuals in an age- and sex-specific population.
[b] Recommended Dietary Allowances for Vitamin A, not RNI. The definitions used for RDA and RNI are the same (but are produced by different institutions).
[c] RAE = Retinol Activity Equivalent
[d] 9-18 year olds for Vitamin A
[e] For girls after menstruation starts
[f] For women after menopause
[g] It is recommended for children (above 2 years old) that 25-35% of total energy should come from fat, and for adults that 20-35% of total energy should come from fat.[23]

[22] Micronutrients (except vitamin A) from WHO and FAO (1998); Vitamin A from Institute of Medicine (2005); Energy and Protein from FAO/WHO/UNU (2004) and Burgess and Glasauer (2004)

[23] FAO (2010)

Appendix 6

Nutrient composition of select foods[24]

All nutrient contents are for 100g edible portion that is raw (uncooked) unless indicated otherwise. This will vary according to where the food is grown or raised and according to cooking, preparation and storage methods.

A dash (-) indicates that data is not available.

		Energy	Protein	Fat	Carbohydrate	Calcium	Iron	Vitamin A	Vitamin B1	Vitamin C
ENGLISH	SCIENTIFIC	kcals	g	g	g	mg	mg	µg (RAE)	mg	mg
CEREALS										
Corn, whole-kernel	Zea mays	111	3.4	1.4	21.1	10	1.7	-	0.10	13
Noodle, rice, dried		353	10.5	0.0	77.7	13	1.3	0	0.16	0
Noodle, rice, fresh		150	3.0	0.9	32.4	5	2.7	0	0.03	0
Noodle, wheat, fresh		229	12.7	3.3	54.5	19	2.0	-	0.01	-
Rice, glutinous, black, polished	Oryza glutinosa	347	8.5	2.6	69.9	21	3.5	3	0.39	0
Rice, glutinous, white, polished	Oryza glutinosa	354	7.3	1.5	77.4	20	1.8	0	0.13	0
Rice, white, polished	Oryza sativa	354	6.8	0.7	79.7	19	1.2	0	0.10	0
Wheat flour	Triticum aestivum T. vulgare	354	11.6	1.3	73.7	68	2.8	0	0.15	0
STARCHY ROOTS & TUBERS										
Cassava, fresh	Manihot esculenta	146	0.8	0.2	34.5	32	1.0	0	0.05	45
Potato, fresh	Solanum tuberosum	76	2.2	0.1	15.7	24	1.4	0	0.12	30
Sweet potato, white, fresh	Ipomeo batatas	106	0.6	0.5	23.5	66	0.7	-	0.16	36
Sweet potato, yellow, fresh	Ipomeo batatas	94	0.6	0.3	20.3	64	0.4	63	0.08	27
Taro, fresh	Colocasia esculenta	117	1.7	0.1	26.1	49	0.8	1	0.11	6
Yam, spiny, fresh	Dioscorea esculenta	118	1.3	0.2	27.2	68	1.2	0	0.08	9
LEGUMES, NUTS & SEEDS										
Chickpea, dried	Cicer arietinum	374	19.8	5.1	62.1	137	5.2	1	0.31	1
Groundnut seed with skin, dried	Arachis hypogaea	543	24.9	43.0	5.2	69	5.9	0	1.31	0
Jackfruit seed	Artocarpus heterophylla	153	5.5	0.2	32.2	-	2.9	-	1.74	24
Lablab seed (bean)*	Dolichos purpureus	344	23.9	1.7	60.7	130	5.1	0	1.13	0
Sesame seed, white, dried	Sesamum indicum	602	22.8	52.0	0.0	952	9.5	0	0.67	0

[24] All from Institute of Nutrition, Mahidol University (2014), except Mango, goat and lablab (marked with *) from U.S. Department of Agriculture, Agricultural Research Service (2013)

ENGLISH	SCIENTIFIC	Energy kcals	Protein g	Fat g	Carbohydrate g	Calcium mg	Iron mg	Vitamin A µg (RAE)	Vitamin B1 mg	Vitamin C mg
VEGETABLES										
Amaranth	Amaranthus tricolor	36	3.3	0.3	5.0	221	2.4	-	0.02	21
Bamboo shoot, fresh	Bambusa sp.	23	2.0	0.4	0.0	24	1.0	1	0.07	5
Banana, flower and bud	Musa sp	32	1.6	0.7	3.1	50	1.1	17	0.02	10
Cabbage, Chinese, fresh	Brassica spp	18	1.7	0.2	1.5	60	1.6	122	0.07	33
Carrot	Daucus carota	35	1.5	0.2	4.9	80	0.7	362	0.06	12
Cauliflower	Brassica oleracea var. botrytis	30	2.6	0.1	3.9	28	0.8	2	0.10	68
Chayote, fruit	Sechium edule	21	0.6	0.1	4.5	24	0.4	3	0.02	10
Cucumber, long	Cucumis sativus	16	0.6	0.1	2.8	18	0.4	2	0.03	8
Eggplant, purple	Solanum melongena	32	1.3	0.1	6.4	20	0.6	7	0.08	18
Gourd, bitter, leaf and top	Momordica charantia	68	4.5	4.5	0.0	207	3.2	332	0.16	65
Gourd, bitter	Momordica charantia	16	0.9	0.1	1.5	33	0.7	14	0.06	42
Gourd, bottle	Lagenaria siceraria, L.vulgaris	20	0.5	1.0	1.5	19	0.3	1	0.03	12
Kale, Chinese	Brassica oleracea var.alboglabra	38	2.7	0.3	6.1	178	2.5	220	0.09	117
Lettuce, garden, leaf	Lactuca sativa	15	1.3	0.1	1.3	62	1.8	130	0.06	23
Moringa, leaf*	Moringa oleifera	64	9.4	1.4	8.3	185	4.0	378	0.26	51.7
Mung bean, sprout	Phaseolus aureus	41	4.3	0.2	4.1	29	1.4	2	0.11	23
Mustard, leaf	Brassica juncea	28	2.2	0.5	3.7	152	2.5	158	0.06	80
Okra (Lady's finger), pod	Hibiscus esculenta	31	1.6	0.2	5.6	44	1.3	14	0.08	17
Onion, spring	Allium fistulosum	39	2.2	0.7	4.6	55	2.3	237	0.06	42
Pennywort, Indian, leaf	Centella asiatica	34	2.3	0.4	3.1	182	4.8	162	0.17	30
Pumpkin	Cucurbita moschata	44	1.3	0.3	7.8	31	0.7	85	0.06	15
Roselle, leaf	Hibiscus sabdariffa	57	1.7	0.1	12.4	9	-	66	0.11	44
Spinach, Chinese	Spinacia oleracia	21	2.5	0.5	0.2	63	4.1	315	0.12	37
Sweet potato, leaf	Ipomoea batatus	39	3.1	0.5	4.4	65	4.9	332	0.10	55
Tomato	Lycopersicum esculentum	23	1.0	0.3	3.4	17	0.9	44	0.07	29
Watercress	Nasturtium officinale	18	1.9	0.1	1.1	158	1.5	98	0.09	57
Winged bean, pod, fresh	Psophocarpus tetragonolobus	23	2.2	0.1	0.9	64	0.7	20	0.07	19
Yard long bean, pod, fresh	Vigna sesquipedalis	35	2.6	0.6	3.4	53	0.8	21	0.10	20

		Energy	Protein	Fat	Carbohydrate	Calcium	Iron	Vitamin A	Vitamin B1	Vitamin C
ENGLISH	SCIENTIFIC	kcals	g	g	g	mg	mg	µg (RAE)	mg	mg
FRUIT										
Apple, red	Pyrus malus	63	0.5	0.4	14.4	7	0.2	7	0.03	2
Avocado, green	Persea americana	168	1.5	15.7	5.1	19	1.6	14	0.06	12
Banana, ripe	Musa sapientum	100	1.0	0.2	22.4	11	0.4	7	0.04	12
Gooseberry, Indian	Phyllanthus emblica	70	0.4	0.1	16.9	18	0.5	-	0.02	243
Guava, white flesh	Psidium guajava	55	0.9	0.2	10.1	21	0.9	4	0.07	141
Jackfruit, fresh	Artocarpus heterophylla	84	1.3	0.4	18.7	28	1.0	9	0.08	5
Lemon	Citrus limonum	31	0.6	0.3	6.5	21	0.3	0	0.05	32
Mango, ripe*	Mangifera indica	60	0.8	0.4	15.0	11	0.2	54	0.03	36.400
Papaya, ripe	Carica papaya	40	0.9	0.1	8.1	25	1.4	71	0.03	62
Pineapple	Ananas comosus	48	0.5	0.1	10.8	17	0.6	2	0.08	17
Pomelo	Citrus grandis, C. maxima	44	0.6	0.2	9.6	21	0.6	10	0.04	59
Tamarind, fruit, ripe	Tamarindus indica	303	2.8	0.5	71.8	135	0.9	1	0.29	30
Watermelon	Citrullus vulgaris	24	0.6	0.1	5.1	8	0.2	21	0.03	6
MEAT, FISH & OTHER ANIMAL PRODUCTS										
Beef (longissimus dorsi)	Bos indicus	-	-	-	-	4	2.6	-	-	-
Beef, liver	Bos indicus	133	20.3	3.5	5.0	16	10.1	8241	0.28	18
Chicken, leg (drumstick)	Gallus gallus domesticus	152	17.9	7.2	4.0	10	1.0	10	0.07	2
Chicken, liver	Gallus domesticus	121	18.6	4.1	2.5	13	7.3	11489	0.32	14
Frog, small	Rana sp.	80	15.1	2.0	0.4	1293	3.8	-	0.08	-
Goat*		109	20.6	2.3	0	13	2.8	0	0.11	0
Pork (shoulder meat)	Sus scrofa	189	18.4	12.8	0	3	0.9	4	1.00	0
FISH & SHELLFISH										
Carp, common	Cyprinus carpio	105	17.0	2.7	3.2	26	1.2	37	0.01	0
Crabmeat, mud	Scylla serrata	98	17.9	2.9	0	183	2.6	218	0.05	0
Cuttlefish	Scylla serrata	72	15.9	0.9	0	16	1.1	22	0.01	2
Eel, swamp	Fluta alba	86	19.7	0.8	0	33	1.7	-	0.07	0
Featherback, grey (knifefish)	Notopterus notopterus	94	19.6	1.5	0.5	77	0.3	87	0	5

		Energy	Protein	Fat	Carbohydrate	Calcium	Iron	Vitamin A	Vitamin B1	Vitamin C
ENGLISH	SCIENTIFIC	kcals	g	g	g	mg	mg	µg (RAE)	mg	mg
Gourami, snake skin	Trichogaster pectoralis	83	17.6	1.3	0.1	59	1.8	24	0.55	3
Perch, climbing	Anabas testudineus	145	17.9	8.2	0	110	1.2	38	0.03	1
Prawn, fresh water	Macrobrachium lanchesteri	98	17.5	1.7	3.1	44	1.7	18	0.04	0
Shrimp, salted, dried	Palaemon sp.	263	46.4	2.9	12.8	2305	20.0	-	0.05	-
Snakehead, striped, dried	Channa striatus	249	45.7	7.0	0.8	194	3.3	-	0.03	-
Tilapia	Tilapia sp.	94	18.4	1.9	0.8	46	0.8	31	0.03	0
Whiting, common/silver	Sillago sihama	89	20.8	0.6	0	86	0.6	24	0.05	0
EGGS & DAIRY PRODUCTS										
Egg, duck, whole	Anasdomesticus	183	12.6	13.6	2.5	62	3.2	328	0.23	0
Egg, hen, whole	Gallus domesticus	159	13.2	11.1	1.5	56	2.8	325	0.13	0
Milk, cow, fresh		68	3.5	4.1	4.2	122	0.3	35	0.04	1
Milk, goat, fluid, full cream		71	3.6	4.1	4.8	136	0.4	35	0.04	2
Yoghurt		76	4.8	4.1	5.0	150	0.1	80	0.06	0
FATS & OILS										
Coconut, mature	Cocos nucifera	362	5.2	35.3	2.7	24	10.7	0	0.06	2
Oil, palm, per 100ml		791	0	87.9	0	-	-	-	0	0
Oil, sunflower		856	0	95.1	0	-	-	-	0	0
SPICES & CONDIMENTS										
Honey		285	0.2	0	71.0	20	2.0	0	0	0
Bird chilli, small, fresh	Capsicum minimum	56	3.7	1.1	2.9	24	1.2	92	0.22	52
Chilli, fried in oil		545	5.2	48.3	22.4	-	-	0	-	-
Garlic, fresh	Allium sativum	51	2.1	0.1	10.4	25	0.7	-	-	-
Ginger root, fresh	Zingiber officinale	39	1.2	0.8	5.2	32	1.6	0	0.04	3
Onion, large	Allium cepa	47	1.6	0	9.3	39	0.7	0	0.03	8
Shallot, bulb	Allium fistulosum, A. ascalonicum	62	1.7	0.1	12.3	50	0.9	0	0.11	9
OTHER										
Cricket	Gryllus bimarculatusr	127	12.9	5.5	4.6	76	9.5	-	0.36	-

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Glossary

Balanced diet means eating the right amounts of food from each of the three food groups.

Body-building foods describes a group of foods whose main purpose is to build the body and the immune system.

Cash crops is a term to describe food and non-food plants that are grown mainly for income rather than to produce food for the family's consumption.

Colostrum is the thick, nutritious, yellowish milk (first milk) which is produced from the breast soon after a baby is born. This milk is nutritious and contains important substances which help protect the child from illness.

Contamination is when food or water becomes unsafe because it has come into contact with germs.

Diet describes the foods people normally eat in accordance with their culture and their preferences.

Energy-giving foods describes a group of foods whose main purpose is to provide energy for the body to function, move, work and give warmth.

Exclusive breastfeeding means feeding a child only breast milk (no other food or liquids) from the first hour of birth until he or she is 6 months old.

Facilitators are the people who assist, guide and support participants in the participatory learning process.

Family foods are nutritious foods from all of the different food groups which the family eats.

First foods are the foods which are introduced to a child from 6 months old which consists of family foods from all of the different food groups.

Food groups describe foods organised by similar nutritional properties. In Myanmar, we talk about three food groups: energy-giving foods, body-building foods and protective foods.

Food security exists when all people, at all times, have physical and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life.[25]

Healthy snacks are foods eaten between meals that contribute to a balanced diet, such as fruit, roasted groundnuts, sesame or other seeds, boiled eggs, bean cakes, boiled roots and tubers.

Hind milk is the milk that comes out of the breast towards the end of a feed which has more fat than the milk that comes out at the beginning of a feed.

Home food production is a way to contribute to the family diet by making food available in and around the home. This can include growing crops in a home garden, keeping livestock or fish, and collecting wild food.

Home hygiene describes actions practiced by family members to keep a home environment clean to avoid the spread of disease, such as regularly cleaning a latrine.

Hygiene is the practice of cleanliness to avoid the spread of disease.

Iodine is a nutrient that is important for healthy growth and development of a child, especially during pregnancy, and for preventing goiters.

Iodised salt is salt that has iodine added to it; using iodised salt is the easiest way to incorporate iodine into the diet.

Iron is a nutrient that is important for healthy blood and proper functioning of muscles and the brain.

Livelihoods are means of making a living; they encompass people's capabilities, assets, income and activities required to secure the necessities of life.

[25] FAO (1995)

Notes

Malnutrition is a condition resulting from not enough nutrients (under-nutrition) or too many calories (over-nutrition) such that it causes health problems.

Nutrients are substances in food which the body uses to grow and to function. There are many different nutrients and each has a different function in the body.

Nutrition security is a situation that exists when secure access to an appropriately nutritious diet is coupled with a sanitary environment, adequate health services and care, in order to ensure a healthy and active life for all household members. Nutrition security differs from food security in that it also considers the aspects of adequate caring practices, health and hygiene in addition to dietary adequacy .[26]

Nutrition-sensitive describes approaches and interventions in various sectors that incorporate specific nutrition goals and actions in order to address the underlying causes of malnutrition.

Over-nutrition is a condition that results when the body gets too many calories (over-nourished people can still suffer from a lack of important nutrients).

Participatory learning is a learning approach which centres on the needs and experiences of participants.

Personal hygiene describes actions practiced by individuals to avoid the spread of disease from their own bodies, such as proper hand washing.

Poor diet describes eating not enough food or not enough of the right foods from the three different food groups.

Protective foods is a group of foods containing vitamins and minerals whose main purpose is to allow the body to function properly and protect the body from disease.

Stunting is longer-term (chronic) under-nutrition characterised by low height compared to age.

The first 1000 days is the period between the start of a woman's pregnancy until the child's second birthday which represents the "window of opportunity" for good nutrition. Good nutrition during this time will have positive effects on the rest of the person's life.

Under-nutrition is a condition that results when the body does not get enough nutrients.

Unhygienic describes practices that will increase the spread of disease.

Vitamin A is a nutrient that is important for vision, growth, development and protection from disease.

Vitamin C is a nutrient that helps protect the body from disease, heal wounds and also helps the body use iron.

Vitamins and minerals are nutrients that allow the body to function properly and protect it from disease.

Vitamin and mineral deficiencies are forms of under-nutrition related to a lack of certain vitamins and minerals in the body.

Wasting is a form of short-term (acute) under-nutrition characterised by low bodyweight compared to height.

Wild food is food from plants or animals which is collected from natural areas such as forests, rivers or mangroves rather than food which is grown or bought.

[26] FAO (2012)

Notes

Learning About Nutrition is a part of a practical toolkit designed to equip field agents to integrate nutrition learning for adults into food security and livelihoods programs. In addition to this manual, accompanying visual aids are included in the toolkit to supplement learning sessions. Based on principles of respect and dignity for all, activities are participatory in order to allow illiterate and marginalised members of communities to fully engage in the training process. Learning sessions teach basic information to help participants discover what they can do to improve nutrition in their households and communities.

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LEARN

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