

Nutrition guidelines

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International Federation
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The International Federation of Red Cross and Red Crescent Societies (IFRC) is the world's largest volunteer-based humanitarian network, reaching 150 million people each year through our 187 member National Societies. Together, we act before, during and after disasters and health emergencies to meet the needs and improve the lives of vulnerable people. We do so with impartiality as to nationality, race, gender, religious beliefs, class and political opinions.

Guided by *Strategy 2020* – our collective plan of action to tackle the major humanitarian and development challenges of this decade – we are committed to 'saving lives and changing minds'.

Our strength lies in our volunteer network, our community-based expertise and our independence and neutrality. We work to improve humanitarian standards, as partners in development and in response to disasters. We persuade decision-makers to act at all times in the interests of vulnerable people. The result: we enable healthy and safe communities, reduce vulnerabilities, strengthen resilience and foster a culture of peace around the world.

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About the nutrition guidelines

Background

Nearly one billion people worldwide suffer from undernutrition, meaning they do not have enough of the right foods to eat. However, lack of access to food is not the only cause; poor dietary and feeding practices and behaviours also play a role. Children are most vulnerable. More than one-third of children in Africa suffer from chronic malnutrition, which by two years of age results in permanent impairment of physical growth and mental development. Malnutrition rates are therefore best measured by the number of children under five years of age who are too short by international standards (known as "stunting"). High stunting rates usually indicate that the entire community may be suffering from nutritional problems.

Health and nutrition are closely linked. Around half of child deaths could be prevented if the child was not malnourished as well as ill. At the same time, illness increases the likelihood that a child will become malnourished. Malnourished mothers give birth to underweight babies, who grow up more likely to have underweight babies themselves. HIV-positive adults need extra nutrients, especially when on antiretroviral medications.

Adults suffering from micronutrient (vitamin and mineral) and other deficiencies are often tired and therefore less productive. This affects their ability to provide for their families and, at the national level, results in a measurable reduction in a country's economy.

Obesity, another facet of malnutrition, is now recognized as a significant and growing problem in most countries and a major contributor to non-infectious diseases such as diabetes. Sometimes, malnourished children and disease-prone obese adults are living in the same household, and there is increasing evidence that malnourished children are more likely to develop obesity and related problems as adults.

Purpose

These guidelines are intended to complement existing International Federation of Red Cross and Red Crescent Societies (IFRC) health reference and training materials, such as the Epidemic Control for Volunteers and Community-Based Health and First Aid (CBHFA) manuals and training materials.[1]

The guidelines are to be used for awareness-raising, capacity-building and integration into National Society health, nutrition and food security programming. Where a National Society is interested in addressing malnutrition as a core objective, it is encouraged to participate in existing national planning and policy dialogues on the issue. Given that many governments and donors are keen to raise the profile of specific initiatives to tackle malnutrition rates, working with the different stakeholders and acting as an implementing partner may be a winning strategy for a National Society to build its own capacity, ensure quality implementation and be part of a programme that can demonstrate impact on a scale that benefits a large number of vulnerable people.

These guidelines may thus be used by National Societies to increase public awareness and to build internal capacities to carry out nutrition-related interventions and to promote good nutrition principles and practices in line with those promoted by other stakeholders. The materials may also be used to integrate efforts to combat malnutrition into existing programmes. For example, they could be incorporated into a training session for staff or volunteers conducted under the community-based health and first aid or food security programmes or included in nutrition education sessions for mothers attending emergency health clinics.

Focus/content

The nutrition guidelines contain information and advice on globally accepted best practices to combat malnutrition and is intended to support "evidence-based programming" (i.e., interventions that are proven by careful research to be successful in achieving the intended objectives). An effort has been made to ensure that the messages promoted here are consistent with existing materials on this and related topics. However, such materials tend to focus on the promotion of breastfeeding and do not cover sufficiently other key topics such as complementary feeding or maternal nutrition.

The materials in the nutrition guidelines are best used as a guide to priority areas for messaging and behaviour change. Locally adapted training materials/message cards on nutrition developed by, or in line with, the Ministry of Health or other local nutrition-promotion programmes may be more appropriate for use at the local level and should be consulted where community-level interventions are being planned.

The core topics addressed to date in these guidelines comprise: Section 1: Introduction to malnutrition; Section 2: Family diet; Section 3: Nutrition for women; and Section 4: Infant and young child nutrition. Related topics such as disease prevention and treatment, HIV, and hygiene promotion are well covered in other existing materials (specifically, the *Implementation guide for Community-based health and first aid in action* (CBHFA); the *Epidemic control for volunteers;* the *Guidelines on HIV prevention*).

1 *IFRC, Epidemic Control for Volunteers, December 2008, and Community-Based Health and First Aid, March 2009.*

1. Introduction to nutrition

By the end of this session, you will:
- Understand why good nutrition is important.
- Know about malnutrition and its causes.
- Know what health and nutrition services and interventions are available.
- Know what volunteers can do.

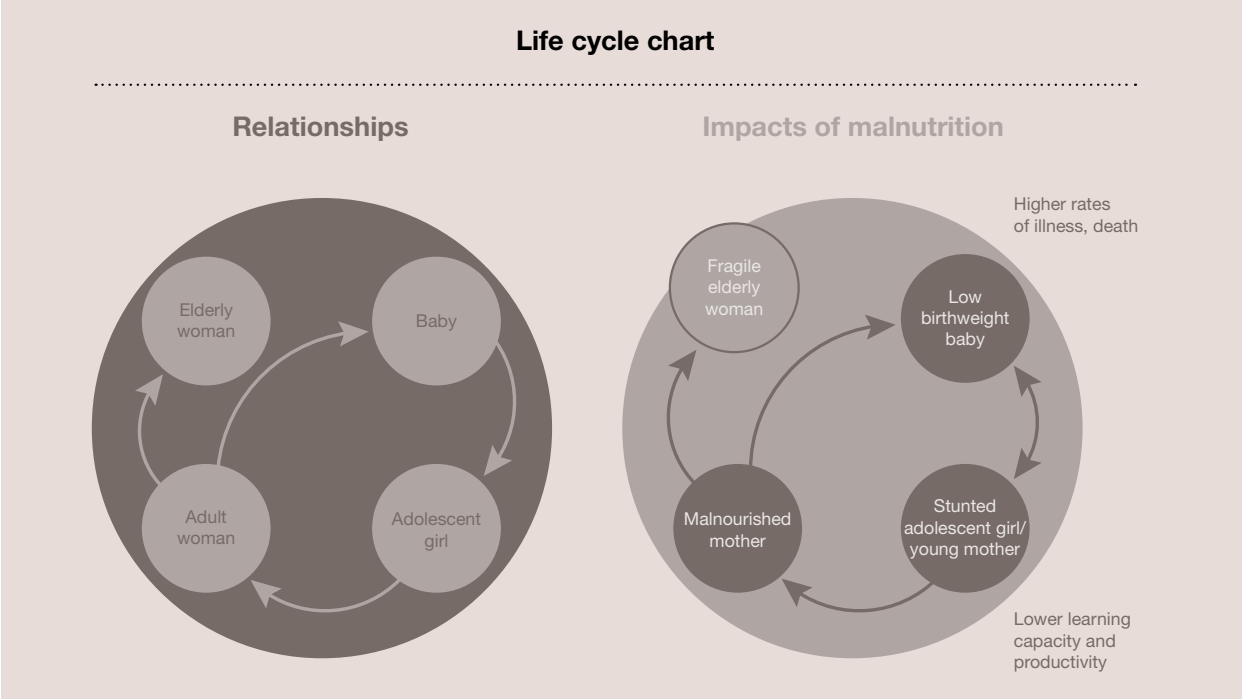
Why is nutrition important?

Our bodies need enough of the right foods to give us energy to grow, learn, work and stay healthy. Children under the age of two have particular needs because their bodies are growing and changing quickly, even before birth. Pregnant and breastfeeding women also need to eat well for their own and their infants' health.

Health and nutrition are closely linked. A well-nourished child is much more likely to recover from a serious illness than a malnourished child. Serious or repeated illnesses such as malaria or diarrhoea can increase the likelihood that a child will become malnourished.

Schoolchildren and adults suffering from micronutrient (vitamin and mineral) or other nutritional deficiencies may feel tired and find it difficult to work hard and may be prone to poor health. In adults this may make it difficult for them to provide for their families. Similarly, adults who are very overweight are more likely to have certain kinds of serious health problems.

Good nutrition is important for every person's health and well-being. However, it is *especially* important for infants and young children, mothers and adolescent girls, who then become mothers. As can be seen from the diagram on following page, poor nutrition at even one stage of the life cycle can adversely affect the health not just of the person concerned, but also of future generations.



The causes of malnutrition are diverse, interlinked and complex:

Immediate causes

- **Inadequate diet:** A person does not consume an adequate diet without eating the right variety (quality) and/or amount (quantity) of food.
- **Diseases:** When a person is ill, appetite is reduced, which in turn affects the body's ability to use food, weakening it and reducing its resistance to further diseases. Diseases and injuries also increase the need for nutrients in order to recover.

Underlying causes

- **Food insecurity:**[2] Food insecurity occurs when a family is unable to produce or buy enough food or a good variety of foods for its needs. Even when there is enough food in the household, it may not be distributed equally, and priority may not be given to vulnerable members such as children or women.
- **Inadequate mother and child care:** Sometimes, mothers and children do not eat the right foods because of limited knowledge, local taboos or poor caring attitudes and practices.
- **Inadequate healthcare and an unhealthy environment:** Limited availability and/or use of basic health services, lack of hygiene in the living area, little or no sanitation and no safe drinking water create health risks and contribute to poor nutrition.

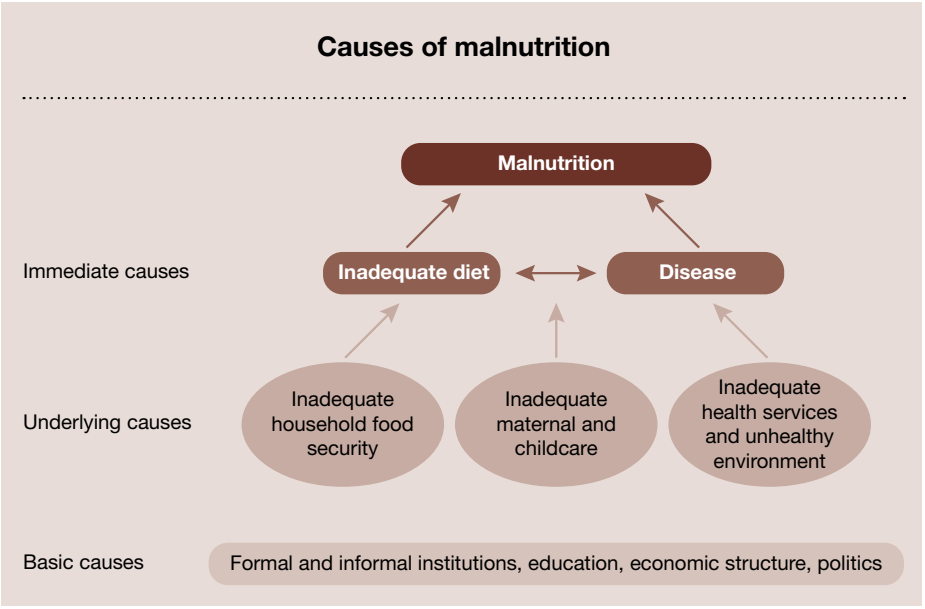
Key messages

Good nutrition is important at all stages of life. Our bodies need enough of the right foods to give us energy to grow, learn, work and stay healthy. Children under the age of two have particular needs because their bodies are growing and changing quickly, even before birth. Health and nutrition are closely linked – a person must be well nourished to be healthy, while poor health can affect nutritional status.

2 *Food insecurity is when there is inadequate availability to, access to and/or utilization of food.*

What is malnutrition?





Malnutrition is a condition that results from lack of food, from not eating the right foods or from the inability to absorb the necessary nutrients[3] from food. A malnourished person has difficulties growing, learning, doing physical work and resisting and recovering from diseases and injuries.

Poor nutrition has serious impacts:

- In more than half of all child deaths from diarrhoea, malaria and pneumonia, malnutrition is an underlying cause.[4]
- In childhood, one out of five malnutrition-related deaths are due to severe malnutrition, but the remaining four are linked to mild or moderate forms of malnutrition which affect most children but are not easily recognizable and are often missed at the community level.

Pregnant and breastfeeding women and young children are the most vulnerable to malnutrition. Children who are malnourished in their first two years of life are proven to suffer permanent (irreversible) physical and mental damage.

Malnutrition during pregnancy puts both the mother and the unborn child at high risk. A malnourished pregnant woman may have complications during her pregnancy or while giving birth. Her child may have growth problems in the womb, resulting in low birth weight. Infants[5] with low birth weight are more likely to have health problems.

Promoting good nutrition

The diagram above shows the three key principles under which certain actions or "behaviours" for promoting good nutrition can be grouped. When it comes to malnutrition, prevention is the best approach.[6]

3 *Proteins, fats, carbohydrates (starch), vitamins and minerals are different kinds of nutrients.*

4 *This means that these children would have survived the illness had they not been malnourished. Another study found that more than 30 per cent of child deaths could be directly attributed to malnutrition.*

5 *These guidelines use the term "infant" to refer generally to children under six months of age and the term "young child" to refer to children over six months of age. The more generic term "baby" has been avoided to limit confusion regarding recommendations that are specific to age. The guidelines use "child" or "children" to refer to infants AND young children.*

6 *In most instances of moderate acute or chronic malnutrition, better dietary and feeding practices are essentially the same whether trying to "cure" or "prevent" malnutrition. For this reason, the emphasis in these guidelines is on* prevention. *A selection process might further differentiate between moderately malnourished young children and all young children, where participation in learning sessions has to be limited or where food aid or cash supplements are proposed. In such cases, participation may be targeted towards either those with malnourished children or those with young children and meeting other vulnerability criteria, or all those with young children. In the event of severe acute malnutrition, volunteers are advised always to refer cases to health posts and would only be engaged in therapeutic care on an exceptional basis, as part of a larger programme.*

The **three key principles** are:

Adequate diet
- Everyone in the household eats enough and a variety of food at all times.

Absence of disease
- Everyone in the household protects themselves against diseases, such as diarrhoea, malaria and HIV, and against intestinal worms, all of which affect use of food by the body.

Appropriate caring practices
- Everyone in the household is well taken care of, especially the most vulnerable members such as pregnant and breastfeeding women and young children. For children, this means good feeding practices and a caring and loving environment. It also means a supportive environment for mothers so that they have adequate food, rest and time to care for their children.

Throughout these guidelines, these three key principles will be referred to, along with recommended behaviours and supporting messages specific to particular groups, such as families (Section 2), adolescent girls and pregnant and breastfeeding women (Section 3), and infants and young children (Section 4).

Key messages

The three key principles of good nutrition are: 1) adequate diet – eating enough of the right foods; 2) absence of disease – staying healthy; 3) appropriate caring practices – good care, rest, hygiene, and a stimulating and loving environment for young children.

What are the types of malnutrition?

While prevention is best, it is important to be able to recognize the different types of malnutrition and to know how to refer people for further treatment when needed.

There are various types of malnutrition:[7] (see table on opposite page)

Note: **Underweight** is another common measure of malnutrition, where a person weighs too little for a given age, being either too thin and/or too short compared to most people of similar age.
- Underweight can be caused by chronic or acute malnutrition and is considered a combined measure of the two kinds of malnutrition. It is reversible with adequate diet and good health and caring practices.
- Underweight children are most likely to suffer from impaired development and are more vulnerable to diseases and illnesses.
- Underweight is measured by comparing weight and age (weight-for-age).

7 *Some experts describe malnutrition as being composed of "undernutrition" (acute or chronic and including micronutrient deficiencies) and "overnutrition" (overweight or obese). These guidelines use the more commonly used terms of "malnutrition" to refer to situations of inadequate nutrition and "overweight" to refer to people who are obese. An overweight person can also suffer from micronutrient or other dietary deficiencies.*

Acute malnutrition (wasting) 	An acutely malnourished person is very thin. Acute malnutrition is also known as "wasting" and can be severe or moderate. It is reversible with appropriate treatment. Wasted children are up to 20 times more likely than well-nourished children to die of common diseases like diarrhoea. Wasting can be common in children between 6 and 24 months. It can be measured by comparing weight and height (weight-for-height) or mid-upper arm circumference (MUAC).
Chronic malnutrition (stunting) 	A chronically malnourished person is normally too short for his or her age but is not always thin. Chronic malnutrition is also known as "stunting". Stunting is irreversible after the age of two years. Stunted children are most likely to suffer from impaired development and are more vulnerable to illness and disease. Stunting can be measured by comparing height and age (height-for-age).
Obesity (underweight) 	An obese or overweight person is too heavy and fat for his or her height. Overweight is reversible with adequate diet and good health and caring practices, especially among growing children and adolescents. Overweight children and adolescents are more likely to suffer from high blood pressure, diabetes and heart disease as adults. Many overweight adults suffer from these diseases. Overweight can be measured by comparing weight and height (weight-for-height).
Micronutrient deficiencies	Special nutrients called vitamins and minerals are needed by the body in very small amounts, so they are called "micronutrients". Micronutrient deficiencies are not usually immediately noticeable but can have a big impact on growth, health and learning ability. Common micronutrient deficiencies include vitamin A, iron and iodine. Micronutrient deficiencies are usually treated on a preventive basis, where they are known to be common in an area.

Key messages

A person who is extremely thin may have acute malnutrition. This is determined by measuring the upper arm with a special tape or by comparing weight and height against a standard. This person may recover with treatment, so referral to a health clinic for treatment is important.

A person who is very short for his or her age may have chronic malnutrition. This is determined by comparing height and age against a standard. Children with chronic malnutrition may be more likely to get sick and have difficulty in school. Effects on physical and mental growth are permanent (irreversible).

A person who is very fat is overweight and may be more likely to suffer from certain diseases such as diabetes later in life. This is determined by comparing height and weight. Returning to normal weight helps reduce health risks.

A person who does not eat a varied diet may lack certain vitamins and minerals (micronutrients). This can affect health at all stages of life and prevent adequate growth and development in children.

Critical forms of malnutrition

Two forms of **acute malnutrition** pose an immediate threat to a child's life and need to be acted upon rapidly: wasting (too skinny or thin) and nutritional oedema (too much fluids in body tissues), or a combination of both conditions.

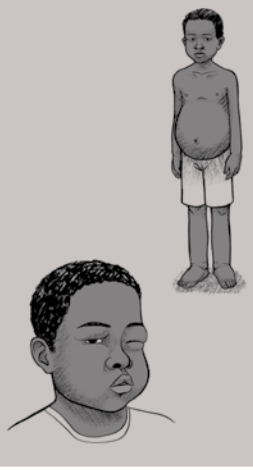
Wasting/thinness
(marasmus)



Due to inadequate diet (not enough variety but especially amount of foods) and/or presence of diseases that reduce the capacity of the body to properly use foods. Wasting can appear as moderate and severe forms of acute malnutrition.
Signs:
Growth failure
- Thin, old-looking face with sunken eyes and cheeks
- Prominent bones, e.g. ribs visible
- Skinny limbs
- Loose skin, especially around buttocks
- Usually has appetite
- Irritable moods (cries a lot)

Detection:
- In an adult, measuring MUAC
- In a child, comparing weight and height to a standard

Nutritional oedema[8]
(kwashiorkor)



Due to inadequate diet (mostly not enough variety of foods) and/or presence of diseases that reduce the capacity of the body to properly use the nutrients in foods. Nutritional oedema is always regarded as a severe form of acute malnutrition.
Signs:
- Bulging, swollen face
- Swollen belly
- Oedema (swelling), which starts with both feet and lower legs but can also expand to the entire body
- Skin changes (pale, peeling, with sores)
- Hair changes (brownish, scanty, straight)
- Loss of appetite
- Loss of interest in surroundings

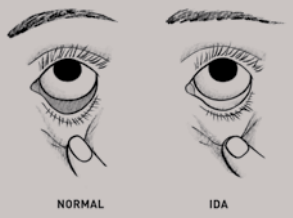
Detection:
- ONLY through checking with finger pressure
- CANNOT tell by just looking

Key messages

Children with swollen bellies have nutritional oedema and/or suffer from parasites or intestinal worms. Such children should be referred to a health clinic for treatment of malnutrition. If parasites or intestinal worms are present, the child should be treated with special drugs.

8 *Oedema is too much fluid in the body tissues, which can be noticed as swelling (e.g. of the ankles, feet, lower legs, hands, eyelids, etc.).*

The following three forms of **micronutrient deficiencies** are common. They are also a big threat to life. It needs a trained eye to recognize them.

Iron deficiency anaemia (IDA)  	Due to lack of iron in the diet and/or presence of diseases such as malaria and intestinal worms. Anaemia affects health and energy. Signs: • Paleness of inner eyelid, nail beds, gums, tongue, lips and skin • Tiredness • Headaches • Lack of breath
Vitamin A deficiency 	Due to lack of vitamin A in the diet and/or presence of diseases such as diarrhoea and measles. Vitamin A deficiency affects health and growth. Signs: • Night blindness Signs of severe deficiency: • Eye dryness accompanied by foamy build-up on the inner eyelids that often appears near the outer edge of the iris (Bitot's spots) • Eye dryness or dullness or clouding of the cornea (corneal xerosis) • Eye softening and ulceration of the cornea (keratomalacia)
Iodine deficiency disorders 	Due to lack of iodized salt and seafood in the diet. Also lack of iodine in the soil (often in mountainous areas) and therefore food grown has no iodine. The body cannot store iodine for a long time and therefore needs tiny amounts every day. Iodine deficiency affects health and mental growth. Lack of iodine can lead to a condition known as "goitre". Signs: • The visible sign of severe goitre is an enlarged neck (thyroid gland).

Key messages

The most common micronutrient deficiencies are iron, vitamin A and iodine, lack of which affect health and growth. Special skills may be needed to detect these potentially life-threatening problems. A varied diet or taking special supplements can ensure people get the micronutrients they need.

What health and nutrition services are needed?

This section describes some health and nutrition services to treat or prevent malnutrition. Preventive health and nutrition services for women will be addressed in Section 3, and more information on these services for infants and young children is provided in Section 4.

The availability of health and nutrition services may vary from one country to another or even from one district to another within the same country. Malnutrition is more common in some areas than others, and government policies and programmes may be influenced by the availability of human and financial resources.

A volunteer should know what services are provided locally and how to refer people to these services according to their needs.

The health and nutrition services available to people with different types of malnutrition are listed below along with their specific benefits.

Health and nutrition services	
For people with acute malnutrition (mostly children)	Therapeutic feeding (for treatment of severe acute malnutrition) • In-patient treatment of people suffering from severe acute malnutrition *with* medical complications and/or no appetite • Out-patient treatment of people suffering from severe acute malnutrition *without* medical complications and with appetite Supplementary feeding (for treatment of moderate acute malnutrition) • Out-patient treatment of moderately malnourished people • Provided mostly in food insecure areas and in emergencies caused by disasters or conflicts
For people with one of the three most common micronutrient deficiencies	Supplementation (for treatment of each micronutrient deficiency) • Iron and folic acid tablets for mild or severe iron deficiency anaemia • Vitamin A oil supplements for night blindness and eye lesions (excluding keratomalacia) • Iodized oil supplements for iodine deficiency (surgery can be required for patients with goitre)
Preventive services for children	Behaviour change and message campaigns focusing on infant and young child nutrition may be delivered through health clinics and other outreach services offered by governments or NGOs. Message campaigns generally focus on good practices, while counselling or group discussions give participants ideas on how to overcome difficulties in applying better practices. In some countries, growth monitoring and promotion services for children from birth to at least two years are provided by local health facilities, where children are weighed and their growth drawn on a chart. In this way, parents and health workers can see whether a child is growing well. If the child is not growing well, nutrition and health advice (counselling) is given. The quality of counselling may vary, but if it is good, it can be effective in helping to improve the child's growth and health.

What can volunteers do?

Volunteers can play a useful role in the detection and prevention of malnutrition in the community and the promotion of good nutrition at community and household levels. Acute malnutrition cases and special problems should be referred to a health clinic.

More specifically, volunteers can be actively involved in teaching the **Essential Nutrition Actions**. This approach consists of a set of recommended behaviours (actions) and related messages aiming to promote good nutrition at key stages of the development of a child and during the life cycle of adolescent girls and mothers.

In addition, volunteers can adopt the "**Triple-A Cycle**" of **Assessment, Analysis, Action** to promote changes in the community. This approach will help them understand if malnutrition is caused by disease, food insecurity or any other causes such as poor caring practices, seasonal migration, workload, water shortage, etc.

Volunteer activities

Essential nutrition actions

Seven **Essential Nutrition Actions**[9] are:

1. Promotion of good nutrition for women.
2. Promotion of best breastfeeding practices.
3. Promotion of best complementary feeding practices for young children (starting at about six months with continued breastfeeding up to at least two years of age).
4. Promotion of good nutritional care of sick and/or malnourished children.
5. Prevention of vitamin A deficiency.
6. Prevention of iron deficiency anaemia.
7. Prevention and control of iodine deficiency disorders.

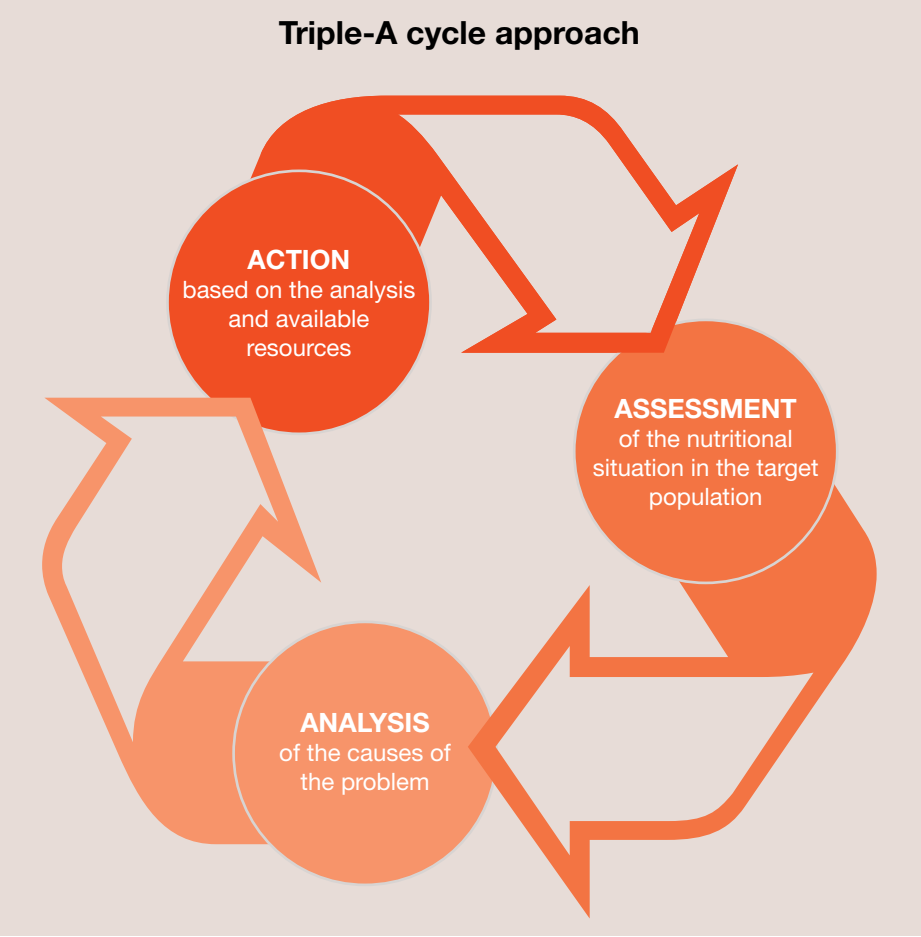
Key underlying principles are to:

- Deliver age-appropriate messages through key contact points in the community.
- Promote behaviour change based on assessment/understanding of local context and culture.
- Promote feasible actions that all family members and communities can understand, undertake or support.

Triple-A cycle approach

The Triple-A Cycle stands for **Assessment, Analysis, Action**. (See figure on following page.)

9 *Simplified adaptation from: CORE Group, Booklet on Essential Nutrition Actions, 2011. This source endorses actions as follows: 1) Promotion of optimal nutrition for women; 2) Promotion of adequate intake of iron and folic acid and prevention and control of anaemia for women and children; 3) Promotion of adequate intake of iodine by all members of the household; 4) Promotion of optimal breastfeeding during the first six months; 5) Promotion of optimal complementary feeding starting at 6 months with continued breastfeeding to 2 years of age and beyond; 6) Promotion of optimal nutritional care of sick and severely malnourished children; 7) Prevention of vitamin A deficiency in women and children.*



Assessment: The volunteer may work with programme staff and the community to understand the current nutritional situation and to identify the most urgent concerns. MUAC measurements (see p. 62-64), child growth monitoring data from a nearby health post, mothers' group self-assessments, house-to-house visits or other assessment methods, such as seasonal calendars, can provide information regarding vulnerable groups, malnutrition and breastfeeding rates, dietary practices, infant feeding practices and other elements necessary to gain a picture of the nutritional situation.

Analysis: Using a variety of methods such as "priority-ranking" and "But why?"[10], volunteers or programme staff can work with community members to explore issues and understand root causes and from there determine priorities.

Action: Once priorities have been identified, actions can be planned based on the questions "What can be done?" "How?" "By whom?" "When?" and "Where?" Available resources should also be identified.

Assessment and **analysis** should be conducted before deciding on the best **action,** and this method can be commonly applied in all kinds of decision-making. After actions have been under way for some time, it is useful to go back to the initial assessment methods and results to identify and document the changes that have taken place, measure progress and impact, and examine whether changes in interventions or approach are needed. This phase is often referred to as "monitoring and/or evaluation."

10 *"But Why?" toolkit is available at http://ctb.ku.edu.*

Early detection and timely referral

Volunteers can learn how to recognize visible signs of acute malnutrition in their communities through training in how to screen children using a MUAC measuring tape and a simple check for oedema. See Toolkit for further information on early detection of acute malnutrition and timely referral of malnourished children.

Section 1 at a glance

The table below describes malnutrition in young children, but it is important to remember that older children and adults may be permanently or temporarily affected by malnutrition. They may suffer from chronic or acute malnutrition or micronutrient deficiencies, or be overweight. All of these conditions create risks to health at all ages.

Easily recognizable types of malnutrition

Acute (wasting)	Chronic (stunting)	Underweight (chronic or acute)	Obesity (overweight)
• Child is exceptionally thin and with no fat/ muscle on the upper arm: indicated as low weight-for-height or low MUAC. • Wasting is reversible with treatment.	• Child is short for age: indicated as low height-for-age. • Stunting is irreversible after the age of two years.	• Child is thin and/or short for age: indicated as low weight-for-age. • Underweight is reversible with appropriate diet and good health and caring practices.	• Child is too heavy and fat for height: indicated as high weight-for-height. • Most common in children experiencing rapid weight gain after the first two years of life (especially if affected by previous wasting, underweight and stunting). • Overweight is reversible with appropriate diet and good health and caring practices.

Acute malnutrition

Moderate acute malnutrition	Severe acute malnutrition
A person with: • some degree of thinness/wasting (low MUAC or low weight-for-height)	A person with: • severe thinness, wasting (exceptionally low MUAC and/or low weight-for-height), or • nutritional oedema in both feet, both legs or in the upper body
Health and nutrition services	
Treatment with supplementary feeding	Treatment with therapeutic feeding (with health services if medical complications)

The three most common micronutrient deficiencies

Iron deficiency anaemia	Vitamin A deficiency	Iodine deficiency
Due to lack of iron in the diet and/or diseases (malaria and intestinal worms) Most obvious signs: • Paleness • Tiredness Can be prevented and treated	Due to lack of vitamin A in the diet and/or diseases (diarrhoea and measles) Most obvious sign: • Night blindness Can be prevented Night blindness and minor eye lesions can be treated Most severe signs such as keratomalacia are difficult to treat	Due to lack of iodine in the diet (iodized salt) Most obvious sign: • Goitre (enlarged neck) Can be prevented and treated at initial stage Once goitre appears it is difficult to treat
Health and nutrition services		
Supplementation of iron and folic acid (mild and severe anaemia)	Supplementation of vitamin A (night blindness)	Iodine replacement (iodine deficiency) Surgery for patients with large goitre

2. Family diet

By the end of this session, you will:
- Understand why good nutrition matters in the family.
- Be familiar with good nutrition behaviours.
- Know what volunteers can do.

Why does good nutrition matter?

The most important aspects of a healthy diet are **variety** and **balance**.

A healthy diet is made up of a variety and balance of different types of food each day, including fruit and vegetables, cereals, tubers, roots, pulses, nuts and animal products. The variety of foods in the diet will usually depend on what is in season and locally available. The amount of food a person requires depends on age, sex and time of life.

Key messages

Healthy food is fresh and natural, and a balanced diet is full of flavour and colour. Food is made up of different kinds of nutrients that are essential for the body to function correctly, grow, fight and recover from diseases.

Essential nutrients are carbohydrates, proteins, fats, vitamins and minerals.

	Macronutrients	Micronutrients
Essential nutrients	Carbohydrates, proteins, fats	Vitamins, minerals
Purpose	Required by the body to function correctly and grow normally	Required by the body to function correctly and fight and recover from diseases
Required amounts	Measurable amounts based on age, sex and time of life	Very small amounts

The following chart shows the four basic food groups:

Four basic food groups* (for a healthy diet choose every day from each group)

Staple foods (starches) – energy
- Grains and cereals
  - wheat, sorghum, rice, millet, maize/corn, teff, etc.
- Products made from grains
  - bread, noodles, tortillas, chapattis, pasta, polenta, couscous, rice cakes, etc.
- Tubers and roots
  - cassava/manioc, potatoes, lotus, yams, taro, etc.

Vegetables and fruits – micronutrients
- Vegetables
  - green leafy and orange vegetables: spinach, cabbage, lettuce, fresh green herbs, chard, amaranthus, carrots, pumpkin, tomatoes, red peppers, etc.
  - other vegetables: okra, cauliflower, broccoli, onion, radish, mushrooms, eggplant (aubergine), etc.
- Fruits
  - orange fruits: papayas, mangos, pomegranates, etc.
  - other: dates, citrus fruits, avocados, melons, apples, guavas, berries, plums, etc.

Meat/animal products and legumes/nuts – proteins, micronutrients
- Pulses, green beans and peas: chickpeas/cowpeas, kidney beans, soy beans, lentils, green peas, etc.
- Products from beans:
  - tofu/soy curd, bean sprouts
- Nuts and seeds:
  - groundnuts, almonds, cashews, sesame, etc.
- Fish and shellfish
- Meat, insects and game
- Poultry
- Eggs
- Dairy:
  - milk, yoghurt, curds and cheeses, dried milk powder

Fats – energy, vitamin A
- Butter, ghee and margarine
- Vegetable oil (fortified with vitamin A)
- Oily seeds:
  - sunflower seeds

* *Suitable for Africa, Americas, Asia, Europe and the Middle East, but can be adjusted to suit specific geographical context.*



To make the meal tasty add, for example, iodized salt, tomato paste, herbs and spices, or small amounts of sugar.

What are good nutrition behaviours?

The following section lists key actions or behaviours and related supporting messages for the promotion of an adequate (varied and balanced) diet among families in the community.

The specific nutritional requirements of adolescent girls, pregnant women, breastfeeding mothers, infants and young children are addressed in separate sessions.

Key messages

To have a healthy and balanced diet means eating a variety of foods that supply nutrients that are important for the body. It does not mean eating expensive food. The nutrients a person's body needs to function, grow and stay healthy can be found in many locally available foods. Pick every day from the four food groups:

- Staple foods (starches)
- Vegetables and fruits (different types – leaves, fruits and tubers – and colours – green, red, yellow/orange)
- Meat/animal products and legumes/nuts (proteins)
- Fats

Below is a list of nine key behaviours. Each behaviour is accompanied by supporting messages providing further information and/or explanations.

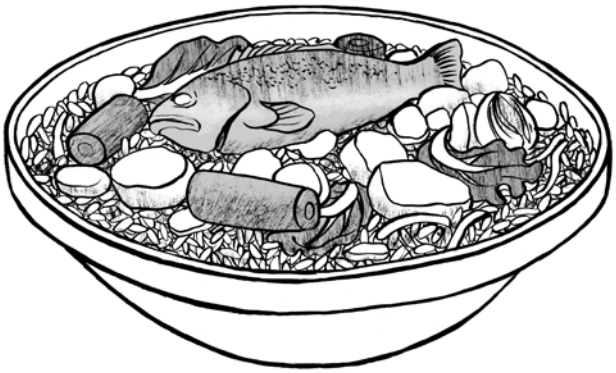
Behaviour 1 – Eat a *variety* of different foods.

"**Variety**" in the diet means consuming all four of the basic food groups each day: staple foods (starches); vegetables and fruits; meat/animal products and legumes/nuts; and fats. Many poor families consume less than four food groups per day, especially during the hungry season. Likewise, poor families most often consume only staple foods such as cereals, roots and tubers, and small amounts of pulses such as beans or lentils.

A **healthy, balanced meal** contains all four basic food groups:

- At least half a plate made up of **staple foods** such as cereals, roots and tubers to provide **carbohydrates**.
- Some **meat/animal products** (e.g., meat, eggs, fish or milk) and/or **pulses** (e.g., dried beans or lentils) to provide **proteins**.
- Plenty of **vegetables** and some **fruits** to provide **vitamins and minerals**.
- Small amounts of **oil** or **butter** to provide **fats.**

Very small amounts of iodized salt should also be consumed to provide **iodine** (mineral).



Healthy snacks, such as fresh fruits, raw vegetables and nuts, and fermented foods, such as yoghurt, can be eaten between meals.



To better understand family diet, a more detailed set of **12 food categories**[11] can be used to examine the kinds of foods eaten or how diets are changing over time (where promoting or tracking dietary diversity).

- Cereals
- Roots and tubers
- Vegetables
- Fruits
- Meat, poultry, organs (kidney and liver)
- Eggs
- Fish and seafood
- Pulses/legumes/nuts
- Milk and milk products
- Oil/fats
- Sugar/honey
- Others, such as condiments and spices

11 *Twelve categories taken from the Household Dietary Diversity Score, Food and Agriculture Organization (FAO) Guidelines for Measuring Household and Individual Dietary Diversity, 1998.* http://www.foodsec.org/fileadmin/user_upload/eufao-fsi4dm/docs/guidelines_MeasuringHousehold.pdf.

Behaviour 2 – Include *carbohydrates* in every meal by eating staple foods such as grains and roots.

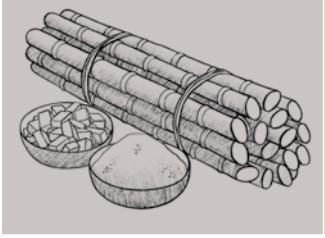
Carbohydrates are the largest proportion of foods we eat and provide most of the body's energy. Most carbohydrates come from staple foods such as cereals and tubers. They may be divided into two groups: **starches** and **sugars**. The effect on the body's energy level depends on the type of carbohydrate. Starches provide sustained energy over a longer period of time, while sugars give quick energy but can make you feel tired afterwards.

Starches



Starches are the plant's energy stores and are converted into sugars in the body. They are found in plant foods such as cereals, pulses, tubers (e.g. potatoes) and some roots (e.g. carrots). Starches such as sorghum, millet, whole grains and brown flours are also a good source of proteins and contain some vitamins and minerals. Starches are best when *unrefined* (whole grain – no parts removed).

Sugars



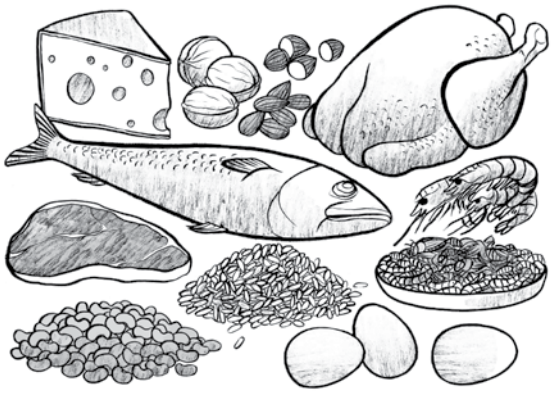
Sugars that are *naturally* present in plants and fruits are a source of energy. Juice made from raw sugar cane provides energy and other nutrients such as vitamins and minerals. Sugars that are added to sweetened drinks and foods are obtained from sugar cane or sugar beet through a process that takes out most nutrients.

Behaviour 3 – Eat *proteins* such as pulses, meat, fish or other animal products daily, where possible.

Proteins provide the nutrients for building and maintaining the body. About 17 per cent of the body, including muscles, bones, skin, nails and hair, is made of protein. Proteins come from plant or animal sources. For growing children, proteins from animal sources are better than proteins from plants.

Foods that are rich in proteins are:

- Animal products, such as meat, eggs, fish and dairy.
- Pulses, such as beans, chickpeas/cowpeas and lentils, and green peas.
- Oil seeds, such as groundnut, sesame and sunflower.
- Cereals, especially unrefined, such as whole grains.



It is important to eat proteins from different sources: a combination of cereals and pulses or animal products provides the best level of proteins.

Behaviour 4 – Include *fibres* in the diet by eating fresh, unprocessed foods every day.



Fibres are an essential part of the diet even though they do not provide any nutrients. Diets with sufficient fibres promote regular digestion which helps the body to remove waste products and increase use of nutrients. Fibres are found in the husks and skins of cereals and pulses.

All plant foods are useful sources of fibres, but the richest are:

- Whole grains and foods made with whole grains.
- Pulses, such as dried beans, peas and lentils.
- Tubers and roots, such as beetroots and carrots.
- Fresh fruits, such as figs, oranges, plums, papayas, apples and mangos.
- Dried fruits, such as dates and raisins.
- Vegetables, such as spinach and cabbage.
- Nuts and seeds, such as sesame and sunflower.

Fibres are particularly important in the adult diet but should be limited in the young child's as they can cause bloating of the stomach and reduce the body's capacity to absorb nutrients.

- Cereals and pulses given to young children should have the husks and the skins removed.

Behaviour 5 – Include only small amounts of fats (oil or butter) in the diet every day.

Fats are a prime source of energy and are stored by the body in special cells as concentrated sources of energy. Fats ensure the smooth functioning of the body, in particular the nervous system.

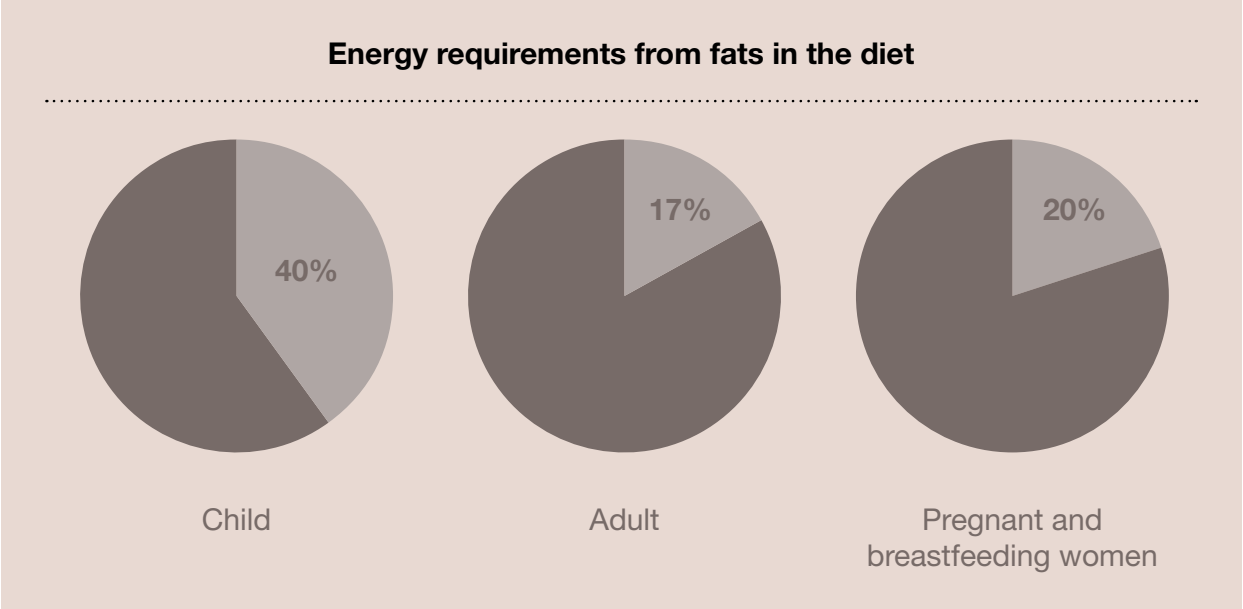
Fats can be divided into two groups:

1. Saturated fats are more solid at room temperature. They mostly come from animal sources such as butter and lard but can also come from plant sources such as coconut oil and palm oil.
2. Unsaturated fats are more liquid at room temperature. They mostly come from plant sources such as corn oil, sunflower oil, groundnut oil and olive oil.

Unsaturated fats are healthier than saturated fats. Natural sources of *good fats* are:

- Seeds, such as sunflower, pumpkin and sesame.
- Nuts, such as peanuts.
- Fruits, such as avocados and olives.
- Fatty fish.

Almost half (40 per cent) of a child's energy should come from fat sources. This is because they have small stomachs and can only consume little amounts of food at a time. By contrast, adults need only gain 17 per cent of their energy from fat sources. At least 70 per cent of adults' energy can come from carbohydrate sources such as staple foods. Pregnant and breastfeeding women should get at least 20 per cent of their energy from fat sources.



Behaviour 6 – Include *vitamins and minerals* in the diet by eating plenty of vegetables and fruits every day and adding small amounts of iodized salt to every meal.

Vitamins and minerals are needed by the body in small amounts to enable it to grow, develop and function. They do not supply energy but work with macronutrients such as carbohydrates, proteins and fats to produce energy.

Vitamins are vital for the body to function properly and to fight against and recover from diseases. While each vitamin has specific properties, their most important functions are to:

- boost the body's capacity to fight against and recover from diseases
- improve the functioning of the nervous system (brain, nerves) and the digestive system (stomach, gut)
- prevent low birth weight
- support growth of the child
- build and maintain strong vision and healthy skin, bones, teeth and muscles.

Minerals provide much of the body structure for bones and teeth and help the body fight against and recover from diseases. While each mineral has specific properties, their most important functions are to:

- promote children's growth and brain development
- boost the body's capacity to fight against and recover from diseases
- improve functioning of the nervous system and the digestive system
- build and maintain healthy bones, teeth and muscles (including the heart)
- improve blood circulation and blood pressure.

To be most effective, vitamins and minerals need to work together. The main sources of vitamins and minerals are:

- fresh orange, yellow, red and green fruits, such as oranges, mangos, papayas, bananas, pineapples, apples, strawberries, guavas, avocados, etc.
- fresh green leafy vegetables such as spinach, broccoli, watercress, cabbage,[12] etc.
- fresh orange, yellow and red vegetables, such as carrots, pumpkins, peppers, tomatoes, etc.

12 *Dark green leafy vegetables are more nutritious than cabbage, which does not contain as many vitamins and minerals. Cabbages may not be the best choice for kitchen gardens for three other reasons: a) they take up a lot of space; b) they require a lot of fertilisers and pesticides; and c) they cannot be picked until the whole plant is mature and ready for harvest (some leafy green vegetables can be picked a little each day from the same plant).*

- unrefined cereals, such as whole grains, millet, sorghum, oats, etc.
- pulses, such as dried beans, peas and lentils, etc.
- fresh red meat and organ meat such as liver and kidney
- fresh fish and fish oil
- nuts and seeds

Iodized salt should be added to every meal because the body cannot store iodine for a long time. Iodine-rich natural sources include:

- milk
- egg yolks
- fish from the sea and other seafood.



Behaviour 7 – Ensure a healthy *balance* of all types of nutrients in the diet.

Too little or too much of each type of nutrient can be unhealthy.

When too much carbohydrate is eaten, the body will not use it immediately. Instead it will be turned into fats and stored by the body. Processed carbohydrates, such as white bread, white rice and maize flour, lose important natural nutrients such as proteins, minerals and vitamins during the refining process. If too much sugar is eaten, especially white processed sugar and sweetened foods and drinks, it will also be turned into body fat. It can also increase the risk of tooth decay and vitamin and mineral deficiencies, particularly in children. It can also easily lead to being overweight.

Too much protein in the adult's diet, especially from animal sources, can increase cholesterol[13] levels and lead to a higher risk of heart disease and cancer.

Too little protein in a child's diet, especially from animal sources, can slow down growth.

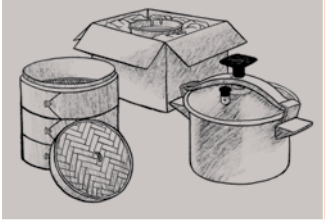
Too much of the "bad" fats in an adult's diet, especially animal fats, can increase cholesterol levels and lead to an increased risk of heart disease, overweight and cancer. To reduce the health risks associated with bad fats, it is important to:

- Keep use of animal fats, such as lard and butter, to a minimum.
- Use vegetable oils instead of margarine and other spreads.
- To reduce fat intake generally, use stir-frying with a little oil instead of deep-frying in a lot of oil.

13 *The human body naturally produces cholesterol. It helps the liver digest foods (especially fats) and protects the nervous system. Excess cholesterol can build up in the walls of the blood channels (arteries) and clog blood circulation. This can lead to heart disease, overweight and cancer. Adults should have their cholesterol level checked at a health clinic from time to time and follow the appropriate medical advice to reduce it if it is too high.*

Not enough vitamins and minerals in a diet can reduce the body's capacity to fight diseases and can hamper its use of foods and the absorption of the nutrients it requires to grow and function. The most common deficiencies are iron, iodine and vitamin A. Micronutrient deficiencies can also cause stunting, wasting and nutritional oedema.

Behaviour 8 – Use *simple and careful cooking methods* to ensure maximum nutrients are obtained from foods.

Vegetables  	Raw fruits and vegetables are the richest sources of vitamins and minerals. Fruits and raw carrots, tomatoes and cucumber make excellent snacks between meals. Raw vegetables can also be served as salads with meals. Herbs, such as parsley, mint, lemongrass, fennel and dill, and flavouring plants, such as ginger root and garlic cloves, are beneficial and may be added to salads and meals. Raw fruits and vegetables need to be cut or washed in safe water just before eating. The less vegetables are cooked, the more vitamins and minerals will be preserved. Vitamins and minerals can be damaged by: • Soaking vegetables and fruits for too long in water. • Cooking vegetables and fruits for too long and with too much water. • Cooking green vegetables with bicarbonate of soda. • Cutting leafy vegetables with a knife instead of ripping the leaves into pieces. The best way of cooking vegetables is by steaming them with a little water instead of boiling them. Leaves from vegetables such as spinach can be steamed for about five minutes in a sieve over rapidly boiling water. Leaves will need to be stirred with a wooden spoon so that all of them are exposed to the steam. The boiled water from vegetables contains a lot of vitamins and minerals and can be added to a stew or used as a sauce, soup or drink.
Pulses	Pulses include sugar beans, fava beans, chickpeas/cowpeas, pigeon peas, soya beans and lentils. Pulses can take a long time to cook and use a lot of fuel. They can also cause bloating and gas in the stomach. To reduce cooking time and gas effects, soak pulses overnight and skim off the foam produced during cooking with a spoon.
Meat, poultry and fish	*Fresh* meat, poultry and fish contain more nutrients than products that have been processed and put in cans. All meat, poultry and fish should be thoroughly cooked. Salmonella is an infection which can be transmitted through undercooked foods (most often chicken or raw or lightly cooked eggs with runny whites/yolks). Children, older persons and sick people are at highest risk of salmonella. The risk of food poisoning is also high with undercooked meat, poultry or fish. Food grilled or roasted over fire or charcoal may burn on the outside and remain undercooked on the inside, which can cause food poisoning. Especially when grilled, meat and poultry should be checked to ensure it is well cooked through. Fish and seafood can be grilled or steamed lightly in as little water as possible until thoroughly cooked. It is advisable to cut off the fat from all types of meat because fat can contain chemicals and pesticides that the animal has absorbed through grazing.

Behaviour 9 – Consume safe water and healthy drinks as part of the daily diet.

Water is essential to life and is crucial for the digestion of food, proper absorption of nutrients and removal of waste from the body. It is recommended that adults drink about eight glasses (approximately 1.5–2 litres) of safe[14] water a day. If it is very hot or a person is suffering from diarrhoea, vomiting or fever, he/she must drink more to replace the lost water. Herbal teas can strengthen and cleanse the body by improving digestion and removal of waste from the body. A glass of fresh fruit or vegetable juice is considered to be the equivalent of a serving of fresh fruit containing at least the recommended daily intake of important nutrients.

- Concentrated vitamins, minerals, sugars and proteins in raw juices are absorbed into the blood quickly, placing minimum effort on the digestive system.
- Juices should be diluted with safe water for young children to avoid diarrhoea.

Unhealthy drinks can adversely affect a healthy diet:

- Tea and coffee reduce the absorption of some important minerals and are best not taken during meals or together with vitamin and mineral supplements.
- Fizzy drinks contain processed sugar and artificial flavours. They can affect the health and feeding habits of young children and should be avoided as long as possible. Because they are highly sweetened, they actually increase the body's need for water, so they are not the best option for quenching thirst.
- Alcohol in excess can cause damage to the liver, vitamin (especially vitamin B) deficiency, digestive problems and loss of memory and concentration.

What can volunteers do?

Volunteers can play a useful role in the promotion of good nutrition at the community and household level, where they can encourage people to change their behaviours and adopt good dietary practices. Specifically, volunteers can be actively involved in teaching community members the importance and benefits of a varied and balanced diet.

Volunteer activities

For the community:

- Eat a healthy diet, leading by example.
- Promote key nutrition behaviours for an adequate (varied and balanced) diet.
- Support demonstration activities to highlight the elements of a varied and balanced diet.
- Identify and address key challenges to recommended behaviours at the household and community level.

14 ***Safe water*** *is defined as water of sufficiently high quality that can be consumed or used for personal and domestic hygiene with low risk of immediate or long-term harm. Most countries will have their own regulations on drinking water quality standards.* ***Safe water sources*** *include properly constructed and maintained piped systems, tube wells or boreholes, covered dug wells, and springs protected from animal and other contamination.* ***Unsafe water sources*** *include surface water (e.g., ponds, rivers and streams), unprotected dug wells and open tanks. Water from these sources can be made safe by boiling, filtering or treating with chlorine. Water should always be stored in a clean container, preferably with a tap. If the container is open, it should be covered with a lid or cloth to avoid insects or dirt coming in. Water should be taken out of the container with a clean scoop or cup. Avoid putting hands into the container or drinking directly from it. Animals should be kept away from stored water.*

Section 2 at a glance

Key behaviours for an adequate diet – Family/community

- Eat a **variety** of different foods.
- Include **carbohydrates** in every meal by eating staple foods such as grains and roots.
- Eat **proteins**, such as pulses, meat, fish or other animal products daily, where possible.
- Include **fibres** in diet by eating fresh, unprocessed foods every day.
- Include only small amounts of **fats** (oil or butter) in diet every day.
- Include **vitamins and minerals** in diet by eating plenty of vegetables and fruits every day and adding small amounts of iodized salt to every meal.
- Ensure a **balance** of all types of nutrients in diet.
- Use **simple and careful cooking methods** to ensure maximum nutrients are obtained from foods.
- Consume **safe water and healthy drinks** as part of a daily diet.

Elements of a healthy diet – Family

Unrefined staple foods	Sugars	Fibres	Proteins	Healthy fats	Vitamins/ minerals
Whole grains, unpolished rice, millet and sorghum are the cheapest and healthiest sources of energy, fibres and proteins and of some vitamins and minerals.	Healthiest are those naturally contained in fresh foods, fruits and raw sugar cane.	Mostly contained in raw fruits and vegetables and unrefined cereals.	Best taken from different sources, for example pulses and/or animal products combined with cereals.	Healthiest are those contained in oils from seeds, nuts, fish and avocados.	Mostly present in raw fruits and vegetables, unrefined cereals and pulses, and fresh meat and fish.

3. Nutrition for women

By the end of this session, you will:

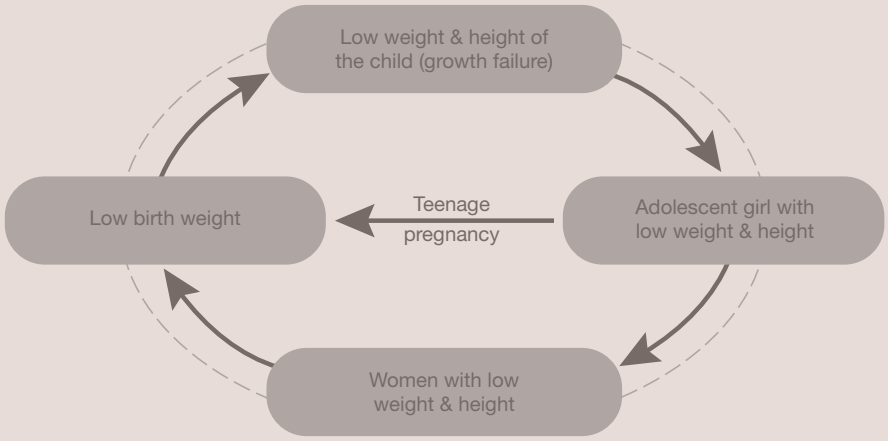
- Understand why good nutrition matters during adolescence, pregnancy and breastfeeding.
- Be familiar with good nutrition behaviours.
- Know what health and nutrition services and interventions are available.
- Understand what volunteers can do.

Why is good nutrition important for women and adolescent girls?

Good nutrition is important even before birth and is especially important for children under the age of two. However, good nutrition is also critical for girls during adolescence and for women of childbearing age. A child born from a well-nourished mother is more likely to have adequate weight at birth and to grow healthy and become strong. Girls who are healthy and well-nourished during their childhood and adolescence will have fewer problems in pregnancy and childbirth.

Conversely, a cycle of poor nutrition can start before birth, and where it continues into adolescence and motherhood, it has effects across generations. Infants with low birth weight and chronically malnourished girls frequently remain undernourished into adulthood. They are more likely to have infants with low birth weight themselves. Furthermore, they are more likely to have chronic diseases as adults.

Cycle of malnutrition through generations



What are good nutrition behaviours for women and adolescent girls?

Section 1 explained how good nutrition depends on different conditions. These can be categorized as follows:

- Adequate diet
- Absence of disease
- Appropriate caring practices.

Below is a list of seven key behaviours[15] and related supporting messages for the promotion of good nutritional practices among adolescent girls, pregnant women and breastfeeding mothers. Supporting messages are for guidance and can be adapted to the local context.

Key messages

Adolescent girls whose bodies are maturing, pregnant women and breastfeeding mothers especially need to have an adequate variety and amount of foods in their diets. Pregnant and breastfeeding women need one to two extra meals a day, along with plenty of safe water. Consumption of iron-rich foods and iodized salt is also important.

15 *The term "behaviour" refers to the actions of a person.*

Adequate diet

Everyone needs an adequate (balanced and varied) diet, composed of ingredients from the four food groups. As women play a special role as mothers, they have extra needs at key points in their life cycle.

Behaviour 1 – Include an adequate variety and amount of foods in the diet.

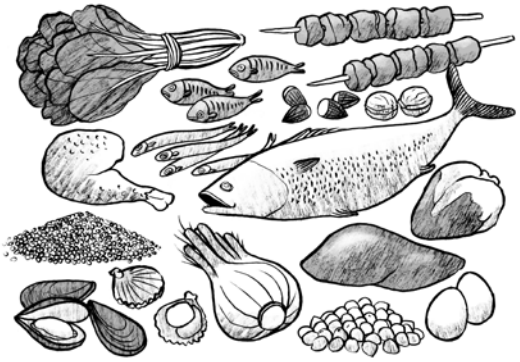
For adolescent girls, pregnant women and breastfeeding mothers	A varied and balanced diet means including different types of foods such as: • Staple foods (millet, barley, sorghum, maize, rice) with every meal. • Pulses, green leafy vegetables and red/yellow/orange fruits and vegetables every day. • Fish, meat and dairy products whenever possible. • Small amounts of fats such as butter, oil and/or oily seeds daily with meals. When staple foods are cassava/manioc, potato or plantain, it is good to mix in cereals where possible with every meal to increase energy. At least two meals a day are recommended for the necessary intake of energy and nutrients. Drinking safe water is recommended as part of a healthy diet, especially between meals. Try to avoid excessive consumption of fizzy drinks, coffee, strong tea, alcohol, white sugar and processed foods.
For pregnant women	**One extra meal** a day is recommended for more energy, especially after the fourth month of pregnancy.
For breastfeeding mothers	**Two extra meals** a day are recommended for more energy, especially during the first six months after childbirth, along with extra amounts of safe water when sitting down to breastfeed.

Foods from the four basic food groups should be eaten each day.

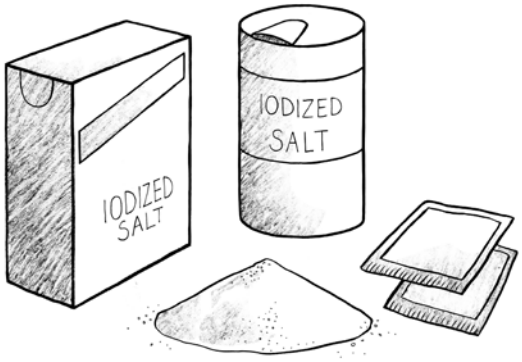


Behaviour 2 – Make sure iron, vitamin A and iodine are present in the diet.

For adolescent girls, pregnant women and breastfeeding mothers	**Foods rich in iron** are dark green leafy vegetables, meat, liver and kidney. Yellow/orange fruits and vegetables are called “iron helpers” as they help the body use the iron. Tea and coffee are called “iron blockers” as they slow down absorption of the iron and should be avoided one hour before and after eating meals. **Foods rich in vitamin A** are dark green leafy vegetables, yellow/orange fruits and vegetables, liver and kidney. Try to add small amounts of **iodized salt** to every meal. Some commercial products like flour and/or vegetable oil have vitamins and minerals already added. These are called “fortified foods” and they have a special logo to help recognize them.
For pregnant women	**Iron tablets** can help prevent anaemia if they are taken daily for six months or as recommended by a health worker. They should be taken with meals to prevent difficulty digesting. Digestion of iron can be improved by drinking plenty of safe water and by eating more fruits, vegetables and other foods with fibres, such as whole grains. Folic acid is sometimes included in iron tablets and helps prevent anaemia and other defects in the unborn child. If folic acid is not included, it is best to take it as a separate tablet as early as possible and throughout pregnancy.



Iron rich products



Iodized salt

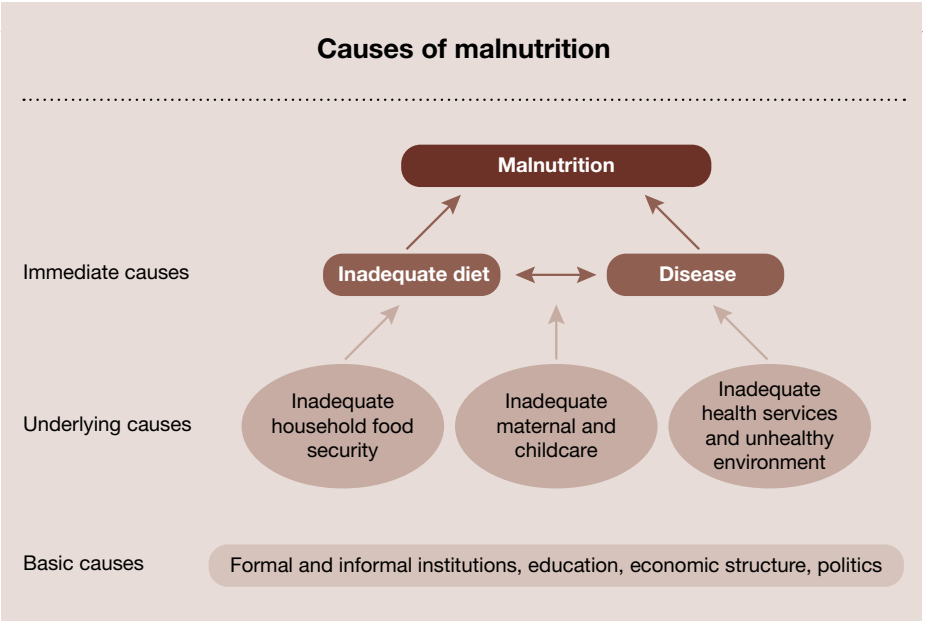


Vitamin A rich products



Fortified food

Absence of disease



Diseases combined with a poor diet can lead to malnutrition. Access to basic health services is therefore important to maintaining good health.

Key messages

Good health is important to maintaining a good nutritional status. Common diseases, such as malaria, intestinal worms and severe respiratory infections (colds), can cause vulnerability to malnutrition or make malnutrition worse. However, specific diseases can be treated by health workers, and the use of malaria bed nets and hand washing with soap or ash are simple but effective preventive measures.

Detailed guidance on the prevention and control of malaria can be found in the CBHFA manual, Module 6, Topic 10. A few guidelines are provided below:

Behaviour 1 – Prevent and treat malaria simply and effectively.

For adolescent girls, pregnant women and breastfeeding mothers	Malaria is spread through the bite of an infected mosquito. The best ways to prevent mosquito bites are: Sleeping under insecticide-treated[16] mosquito nets (these should be dipped in insecticide *every six months*). Priority should be given to children under five years of age and pregnant women. Wearing clothes that cover as much of the body as possible, especially between sunset and sunrise. If a high fever or headache is detected, an immediate visit to the local health facility is recommended for diagnosis and treatment.
For pregnant women	Malaria during pregnancy can cause severe anaemia and result in the death of the foetus (infant in the womb) or in an early birth with low weight.

16 *The net is covered in a substance that repels or kills mosquitoes on contact with the net.*

Behaviour 2 – Prevent and treat intestinal worms simply and effectively.

For adolescent girls, pregnant women and breastfeeding mothers	Intestinal worms can enter the body through the mouth when eating with dirty hands or when consuming food or water containing worms or worm eggs. The best way to prevent intestinal worms is to practise good hygiene by: • Burying all excrement or disposing of it in a latrine or toilet and keeping the living area clean. • Washing hands and nails with water and soap or ash before preparing and eating food. Intestinal worms can also enter the body through skin contact with soil containing worms or worm eggs. Wearing shoes can prevent this. De-worming tablets are effective if they are taken twice a year, where intestinal worms are prevalent. *Note:* Pregnant women cannot take de-worming tablets during the first three months of pregnancy.







Appropriate caring practices

Key messages

Appropriate caring practices for adolescent girls and women help to protect their health and nutritional status, as well as that of their future children. Teenage mothers are at especially high risk of nutritional, health and other complications during pregnancy, and their infants are more likely to be born underweight. Delaying marriage and pregnancy and staying longer in school can be beneficial. Pregnant women/girls need extra rest. At least two years between each birth is healthier for both the children and the mother. A woman who has more than four children faces increased health risks for her and the infant.

Behaviour 1– Avoid early marriage and/or pregnancy until at least 18 years of age.

For adolescent girls	Teenage girls who are pregnant are especially vulnerable as their bodies need to divide their nutrients between the infant in the womb and the mother (as she still needs food for her own growth). Teenage pregnancy presents high health risks for the mother during childbirth. It is also more likely to result in an early birth and low birth weight.

Behaviour 2 – Attend school for as long as possible.

For adolescent girls	Educated girls are better able to protect their own health as well as that of their families, even in the poorest households and communities. Girls who have at least seven years of schooling are more likely to marry later and delay their first pregnancy to avoid health risks.

Behaviour 3 – Take enough rest, especially after four months of pregnancy.

For pregnant women	Pregnant women need more sleep and assistance with their workload. The husband or other family members can help with domestic tasks. It is better for pregnant women not to carry heavy weights such as water containers or firewood, as this increases health risks during pregnancy.

Behaviour 4 – Avoid smoking, alcohol, drugs and exposure to other poisons, especially during pregnancy.

For pregnant women and breastfeeding mothers	Smoking tobacco or exposure to smoke from cooking fires increases the chance of the infant being small and being born with breathing problems. Exposure to drugs, pesticides, herbicides and other chemicals may affect the physical and mental development of the infant in the womb. Only trained health workers should prescribe medical drugs during pregnancy.

Behaviour 5 – Take enough rest during the first six months after childbirth.

For breastfeeding mothers	Stress in a mother can have a negative effect on breastfeeding. The husband or other family members can help with domestic tasks. There are "baby-friendly" laws in many countries to ensure that working conditions support exclusive breastfeeding in the first six months.

Behaviour 6 – Delay the next pregnancy for at least two years.

For breastfeeding mothers	Two or three years between births will allow a mother to recover fully. If a recent mother becomes pregnant again, there is a high risk of the infant being born early and with low birth weight. Children born two or more years apart grow up healthier and show better physical and mental development than those born very close together. One of the greatest threats to the health and growth of a child under two is the birth of a new infant, because mothers commonly stop breastfeeding when they become pregnant, and they have less time to feed the older child properly. If exclusive breastfeeding is practised, the next pregnancy can be delayed, but only if ALL of the following conditions exist: • The breastfeeding mother has not restarted menstruation. • The infant is less than six months old. • The infant is exclusively and regularly breastfed and does not use a pacifier or dummy. If any of these conditions are not present, advice should be sought from trained health workers on various family planning methods.

Behaviour 7 – Try to limit pregnancies to no more than four in a lifetime.

For breastfeeding mothers	After four pregnancies, mothers face increased health risks, especially if each birth is less than two years apart. These health risks are: • anaemia • heavy bleeding during childbirth • early birth of the infant • low birth weight of the infant (already malnourished) Family planning is also the responsibility of the husband. Fathers should be aware of the importance of limiting the number of pregnancies to help protect the health and well-being of mother and children.









What health and nutrition services are available?

This section provides an overview of health and nutrition services for adolescent girls, pregnant women and breastfeeding mothers. The availability of health and nutrition services may differ from one country to the next depending on existing policies and programmes. As a volunteer, it is good to learn what exists locally and how you can best refer people to these services according to their needs. Below are listed the health and nutrition services available to each of the target groups, starting with adolescent girls. The services are listed with their specific benefits for easy reference. (For more detail on disease prevention and health promotion, refer to the CBHFA manual, Module 6.)

Key messages

A variety of services aiming to support good nutrition in adolescent girls and pregnant and breastfeeding women may be available through local health posts, clinics or hospitals. These services include: vitamin or mineral supplementation; family planning services; treatment of illness caused by intestinal worms or diseases such as malaria or HIV; and mother and child care before, during and after birth.

Health and nutrition services

For adolescent girls	**Supplementation[17] of iron and folic acid tablets** To prevent anaemia and birth defects. *Note:* Free supplementation is not available in most countries. **Supplementation of iodized capsules** To prevent iodine deficiency. *Note:* This is only available in countries with high iodine deficiency rates and limited distribution of iodized salt. **Adolescent-friendly reproductive health services** • For family planning • For prevention of HIV/AIDS and sexually transmitted infections. *Note:* These services are available in most countries.

17 *The term "supplementation" refers to the provision of additional vitamins and minerals in tablet form.*

Health and nutrition services

For pregnant women	**Antenatal care**[18] Pregnant women are expected to visit the local health facility at least four times. The following services are directly linked to nutritional benefits: **Supplementation of iron and folic acid for six months during pregnancy** The health worker should provide the pregnant woman with enough tablets to last until the next antenatal visit. Pregnant women are expected to take iron and folic acid tablets every day for six months. **De-worming** De-worming tablets must not be taken during the first three months of pregnancy. From the fourth month, the health worker may prescribe one or two doses if necessary. **Preventive malaria treatment** The health worker will prescribe two doses. *Note:* Preventive malaria treatment is only available in areas where malaria is common. **Supplementation of iodized capsules** The health worker will provide one dose during pregnancy. *Note:* Iodine supplementation is only available in areas with high iodine deficiency and limited availability of iodized salt. **HIV voluntary counselling and testing** In most countries this service is provided as part of antenatal care to prevent mother-to-child transmission of HIV during childbirth and/or during breastfeeding.
For breastfeeding mothers	**Safe childbirth** In most countries women are advised to see a skilled birth attendant. *Note:* Women are also encouraged to plan ahead if emergency health care is required for childbirth (this may include travel). **Postnatal care**[19] Skilled birth attendants are expected to check the health of the mother and her infant within a day of the birth and periodically over the next six to eight weeks. The health worker should provide the mother with one dose of vitamin A within six to eight weeks of childbirth. *Note:* Vitamin A is transferred to the infant through the mother's breast milk to help the infant fight diseases. **HIV voluntary counselling and testing** Knowing a mother's HIV status is vital to preventing mother-to-child transmission of HIV during childbirth or breastfeeding. HIV-positive mothers can consult the health worker for the best infant and young child feeding options. **Family planning services** In most countries, family planning services are available through health facilities. Condoms are proven protection against pregnancy and sexually transmitted infections, including HIV.

What can volunteers do?

Volunteers can play a useful role in the promotion of good nutrition at community and household levels, where they can encourage people to change their behaviours and adopt safe practices.

More specifically, they can be actively involved in teaching adolescent girls, pregnant women and breastfeeding mothers the benefits of an adequate diet, the absence of disease and appropriate caring practices.

18 *Antenatal care is the health and nutritional care provided to a pregnant women to ensure that she and the baby in her womb stay healthy until she gives birth.*

19 *Postnatal care is the health and nutritional care provided to a woman and her newborn during the first few weeks after birth.*

Volunteer activities

For adolescent girls, pregnant women and breastfeeding mothers	• Promote key behaviours for an adequate diet, disease prevention and treatment, and appropriate care. • Identify and address key challenges to recommended behaviours at household and community levels.
For adolescent girls	• Raise awareness of the importance of nutrition for adolescents, especially girls, through youth clubs/groups. • Collaborate with teachers' and parents' associations to promote nutrition education in schools.
For pregnant women	• Encourage pregnant women to go for antenatal check-ups at least four times. • Encourage mothers to take iron and folic acid tablets daily for the duration prescribed by the health worker.
For breastfeeding mothers	• Encourage mothers to get skilled assistance during childbirth and check that they get one dose of vitamin A within six to eight weeks of childbirth. • Raise awareness of the importance of at least a two-year space between births and the need to limit the number of pregnancies to four for the health of mothers and their children. • Direct both men and women to the nearest family planning services so they can make an informed decision on the future of their families.

Section 3 at a glance

Key behaviours for adolescent girls

For adequate diet	For absence of disease	For appropriate care	Health and nutrition services
• Adequate amounts of food (at least two meals/day). • Adequate variety of food. • Adequate intake of iron, vitamin A and iodine.	• Malaria is prevented and treated. • Intestinal worms are prevented and treated.	• Marriage and/or first pregnancy is delayed until at least 18 years. • Girls are educated as long as possible.	• Supplementation of iron and folic acid tablets. • Supplementation of iodized capsules. • Youth-friendly reproductive health services.

Key behaviours for pregnant women

For adequate diet	For absence of disease	For appropriate care	Health and nutrition services
• Adequate amounts of food (at least three meals/day). • Adequate variety of food. • Adequate intake of iron, vitamin A and iodine. • Folic acid tablets are taken daily throughout pregnancy (especially in the first months). • Iron tablets are taken daily for six months or as recommended by a trained health worker.	• Malaria is prevented and treated. • Intestinal worms are prevented and treated.	• Enough rest is taken during the fourth month of pregnancy. • Smoking, alcohol, drugs and exposure to pesticides, herbicides and other poisons are avoided.	• Antenatal care (at least four visits). • As part of antenatal care: – Supplementation of iron and folic acid tablets for six months – Supplementation of iodized capsules – De-worming – Preventive malaria treatment – HIV voluntary counselling and testing

Key behaviours for breastfeeding mothers

For adequate diet	For absence of disease	For appropriate care	Health and nutrition services
• Adequate amount of food (at least four meals a day). • Adequate variety of food. • Adequate intake of iron, vitamin A, iodine.	• Malaria is prevented and treated. • Intestinal worms are prevented and treated.	• Enough rest is taken during the first six months after childbirth. • The next pregnancy is delayed for at least two years. • Smoking, alcohol, drugs and exposure to pesticides, herbicides and other poisons are avoided. • Number of pregnancies is no more than four.	• Safe childbirth (skilled birth attendant). • As part of postnatal care: – Supplementation of one dose of vitamin A within first six/eight weeks of delivery. • Family planning services. • HIV voluntary counselling and testing.

Four basic food groups* (for a healthy diet choose every day from each group)

Staple foods (starches) – energy
- Grains and cereals
  - wheat, sorghum, rice, millet, maize/corn, teff, etc.
- Products made from grains
  - bread, noodles, tortillas, chapattis, pasta, polenta, couscous, rice cakes, etc.
- Tubers and roots
  - cassava/manioc, potatoes, lotus, yams, taro, etc.

Vegetables and fruits – micronutrients
- Vegetables
  - green leafy and orange vegetables: spinach, cabbage, lettuce, fresh green herbs, chard, amaranthus, carrots, pumpkin, tomatoes, red peppers, etc.
  - other vegetables: okra, cauliflower, broccoli, onion, radish, mushrooms, eggplant (aubergine), etc.
- Fruits
  - orange fruits: papayas, mangos, pomegranates, etc.
  - other: dates, citrus fruits, avocados, melons, apples, guavas, berries, plums, etc.

Meat/animal products and legumes/nuts – proteins, micronutrients
- Pulses, green beans and peas: chickpeas/cowpeas, kidney beans, soy beans, lentils, green peas, etc.
- Products from beans:
  - tofu/soy curd, bean sprouts
- Nuts and seeds:
  - groundnuts, almonds, cashews, sesame, etc.
- Fish and shellfish
- Meat, insects and game
- Poultry
- Eggs
- Dairy:
  - milk, yoghurt, curds and cheeses, dried milk powder

Fats – energy, vitamin A
- Butter, ghee and margarine
- Vegetable oil (fortified with vitamin A)
- Oily seeds:
  - sunflower seeds

* *Suitable for Africa, Americas, Asia, Europe and the Middle East, but can be adjusted to suit specific geographical context.*

To make the meal tasty add, for example, iodized salt, tomato paste, herbs and spices, or small amounts of sugar.





4. Infant and young child nutrition

By the end of this session, you will:

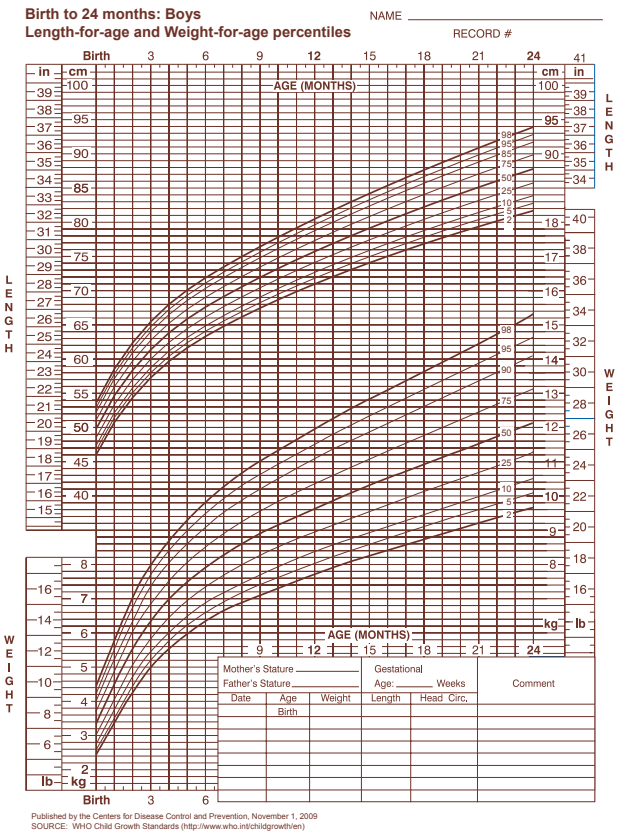
- Understand why good nutrition matters in the first two years of life.
- Be familiar with good nutrition behaviours.
- Know what health and nutrition services and interventions are available.
- Know what volunteers can do.

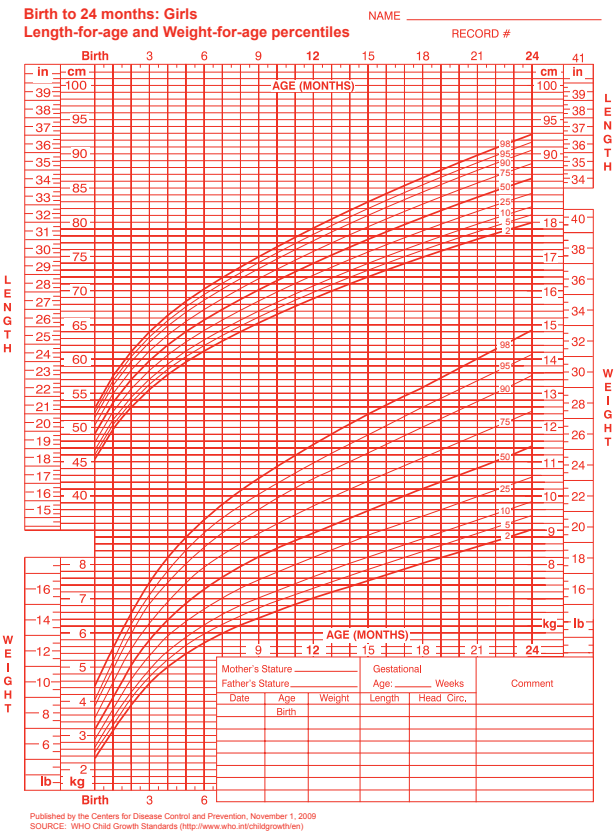
Why is good nutrition important for infants and young children?

Good nutrition in the first two years of life ensures that a child has the best possible mental and physical growth as a good start for health in adulthood.

Key messages

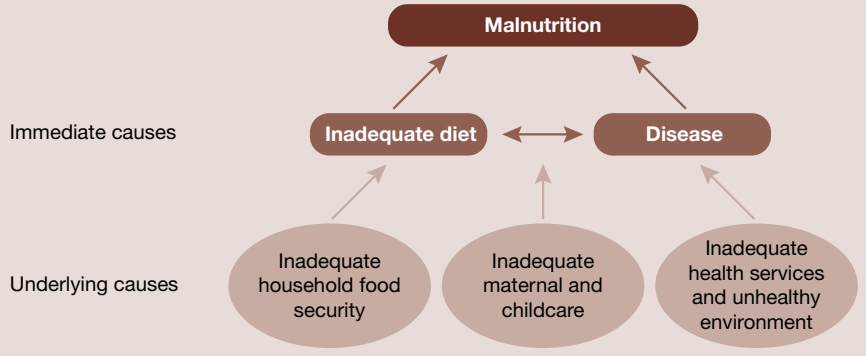
Young children grow very fast and have huge nutritional needs, especially from six to nine months, making this period critical for a child's future well-being. Experts have shown that children who do not receive good nutrition in their first two years are more likely to suffer from poor health later in life, and their bodies and brains may not grow properly. Malnourished children are often sick and become tired easily. As a result, their performance in school is not as good as healthier, well-nourished children.





What are good nutrition behaviours?

Causes of malnutrition



Previous sections explained that good nutrition depends on different conditions. These can be categorized as follows:

- Adequate diet
- Absence of disease
- Appropriate caring practices.

Below is a list of 16 key behaviours for the promotion of appropriate feeding of infants and young children. Each behaviour is accompanied by a series of supporting messages providing further information and/or explanations. In this case, the term "behaviour" refers to the actions of the mother or caregiver. Specific messages are given for a certain age (for example at birth, up to six months, at six months, etc.). Supporting messages are for guidance and can be adapted to the local context.

Key message

The nutritional requirements of the child change continuously in the first two years.

Adequate diet

EXCLUSIVE BREASTFEEDING (Behaviours 1 to 3)

"Exclusive breastfeeding" means that breast milk is provided as the only food and drink for an infant during the first six months. "Early breastfeeding" means within the first hour of birth.

Key messages

Infants should be fed only breast milk for the first six months, beginning within one hour of birth, with skin-to-skin contact. The thick yellow milk (colostrum) produced by the mother in the first few days after childbirth is very good for infants. No other liquids should be given to infants.

Behaviour 1 – Place the infant on the breast within one hour of the birth, with skin-to-skin contact.

At birth	Breast milk ALONE is the best start to every infant's life. NO water, sugar water or any other fluids such as tea or fizzy drinks should be given to the infant. Putting the infant on the breast immediately after birth will help the mother to: • produce breast milk • reduce bleeding from childbirth • expel the placenta. If childbirth has taken place without complications, skilled birth attendants will only need to cut the umbilical cord and dry the infant before putting him/her on the mother's breast. Continued skin-to-skin contact with the mother protects the infant from the cold. For this reason, it is better to bathe the infant the next day. First-time mothers often need encouragement to begin breastfeeding. A family member or friend who has breastfed can help them overcome initial worries and prevent future difficulties.



Behaviour 2 – Ensure the infant consumes the thick yellow milk produced directly after birth.

Few days after birth	The thick yellow milk produced by the mother is called "colostrum" and is very important for the infant in the first days after birth because: It is highly nutritious and rich in vitamin A. It protects the infant from diseases. It helps the infant to expel the first dark stool. Other fluids such as water, sugar water, tea or fizzy drinks should NOT be given.

Behaviour 3 – Give the infant ONLY breast milk for the first six months.

Up to six months	Breast milk is the *only* drink required by an infant up to six months of age, even in hot, dry climates. Breast milk is always available at the right temperature and comes at no cost. Animal milk, infant formula, powdered milk, teas, sugar drinks, water and cereal foods should *not* be given to the infant in the first six months as they are not as nutritious as breast milk and cannot protect the infant from diseases. Some of these products can even be harmful to the infant. An infant needs ONLY breast milk for the first six months because it: • is the only food/drink required by the infant to grow healthy and strong • will protect the infant against diseases such as diarrhoea and pneumonia • is quick and easy to digest for the infant's small stomach. It is best for the mother to completely empty one breast before offering the second breast. This is the only way the infant will get the: • "front milk" to satisfy thirst • "back milk" to satisfy appetite. If the mother is separated from the infant during the day, she can express (extract) enough breast milk to feed the infant in her absence. If this is done, a few things should be kept in mind: • expressed breast milk can be stored up to 8 hours at room temperature or up to 24 hours in a refrigerator • expressed breast milk can be given to the infant using a clean, open cup • expressed breast milk should NOT be given to the infant using a bottle because it can affect good breastfeeding.



OPTIMAL BREASTFEEDING (Behaviours 4 to 6)

"Optimal breastfeeding" means that the mother starts breastfeeding at birth and continues until the child is at least two years. Recommended behaviours help mothers produce breast milk and avoid breastfeeding problems.

Key messages

Infants should be fed as often and for as long as they want. First time mothers may need support and guidance to ensure infants are well positioned and attached for successful breastfeeding and to minimize possible discomfort. It can take time for the mother and infant to settle into and adapt to a routine. Recommended behaviours help mothers produce breast milk and avoid difficulties. It is important that mothers continue breastfeeding even if they or their babies are unwell. Pregnant women can continue to breastfeed.

Behaviour 4 – Allow the infant to breastfeed on demand, day and night.

From birth up to at least two years	Breastfeeding on demand means offering the breast as often and as long as the infant wants. Breastfeeding frequently helps the milk to flow, stimulated by the suckling of the infant at the breast. Breastfeeding at least eight to ten times a day means feeding the infant every three hours or even more frequently, especially in the first six months. Pacifiers or dummies should not be given because they affect good breastfeeding, causing the infant to stop or reduce suckling at the breast.

Behaviour 5 – Ensure correct positioning and attachment of the infant at the breast.

From birth up to at least two years	Correct positioning of the infant at the breast can prevent common breastfeeding problems. Signs that an infant is properly positioned are: • The infant's whole body is close to the mother's body. • The infant's whole body is facing the mother's body. • The infant's whole body is held, not just the neck and shoulders. • The infant looks relaxed and content. Correct attachment of the infant to the breast can prevent common breastfeeding problems. Signs that an infant is properly attached are: • The infant is brought to the breast (not the breast to the infant). • The infant's mouth is open wide. • The infant's mouth covers the whole nipple and a good portion of the dark skin around the nipple. • The infant's lips curl outwards. • The infant's chin touches the breast. • The infant takes long, deep sucks. • The mother does not feel any pain in the nipple.



Poor attachment



Good attachment



Different breastfeeding positions

Behaviour 6 – Continue breastfeeding even when unwell.

From birth up to at least two years	Mothers can continue to breastfeed even if they have a headache, backache or common diseases such as fever, diarrhoea and chest infections. Malnourished mothers are still able to produce breast milk. Rest is important for recovery. Other family members can help the mother with her domestic tasks. For a faster and better recovery, mothers should try to: • Drink extra water and herbal teas. • Continue to eat at least four meals a day, even when not hungry. • Ensure a variety of foods in the diet. Health workers should be informed if a mother is breastfeeding while unwell, so they may prescribe the appropriate medicines. *Note:* Some medicines have side effects for breastfeeding mothers, who should check labels and/or consult a health worker. Pregnant women can continue to breastfeed.

COMPLEMENTARY FEEDING (Behaviours 7 to 9)

"Complementary feeding" means that the mother continues to breastfeed on demand while also introducing appropriate foods.

Key messages

Appropriate foods should be introduced in addition to breast milk from six months of age. Young children need to eat more often than older children and adults, so multiple small meals or healthy "snacks" in between family meals are important. Young children have to learn to swallow and chew, and their bodies must gradually adapt to family foods and a varied diet. Introducing foods with different textures and tastes and with enough energy and nutrients is recommended. Active feeding practices such as giving children their own plate or cup and setting aside portions for later if they are not ready to eat can help caregivers ensure that they are eating enough. Holding infants and talking and singing to them and other playful interaction is important around feeding and other times. This can encourage them to eat and stimulates their mental growth. A mix of staple foods or adding vegetables, fruits, nuts or meat/animal products to porridges is more nutritious for young children than giving them staple foods alone.

Behaviour 7 – Introduce the infant to foods in addition to breast milk at six months.

At six months	The infant is ONLY ready for foods and drinks in addition to breast milk at six months. If foods and drinks are introduced before: • The infant can get diseases such as diarrhoea and pneumonia. • The infant's physical and mental growth may be delayed. If the mother does not know the infant's age, the following signs will help determine whether the infant is ready for "complementary foods:" • The child can sit up. • The child can grasp and shake objects. • The child explores objects with his/her hands and mouth. One new food should be introduced at a time to allow the child to get used to it and for the mother to see if the child is eating without any problems. Animal milk is not an appropriate substitute for breast milk because it does not contain enough minerals and vitamins. Note: Cow's milk as a drink should be introduced as late as possible.

Behaviour 8 – Provide sufficient and appropriate complementary foods from six months up to at least two years, with attention to recommended feeding practices and alongside continued breastfeeding.

There are a number of key principles to observe for young children to achieve good physical and mental growth:

- **Sufficient food**: Young children need the **right amount** of food at the right time for their growing bodies. They need to eat more often than older children and adults (several small meals or healthy "snacks" in between family meals).
- **Appropriate food:** Young children need the **right kinds** of foods as they are learning to swallow and chew and as their bodies adapt to family foods and a varied diet**.** It is important to ensure that the texture or thickness of the food matches the young child's ability to chew and swallow, especially in the early stages. A varied diet providing enough energy and other nutrients is also critical.
- **Complementary food:** Foods should be given in addition to (or complementary to) breast milk.
- **Feeding practices:** How children are fed is also important. Active feeding practices such as giving them their own plate or cup and setting aside portions for later if they are not ready to eat can help caregivers ensure that young children are eating enough. Holding infants and young children, talking and singing to them and other playful interaction is also important around feeding and other times. This can encourage them to eat and stimulates their mental growth.



The following tables give an overview of a child's complementary feeding needs. Below each principle (frequency, amount, etc.), specific messages are listed appropriate to the child's age.

When talking about complementary feeding, a distinction is made between:

- **Complementary foods**, such as porridge, and hot meals based on staple foods.
- **Snacks** such as "finger foods" (small food items), which can be given in between meals.

Examples of snacks include bananas, ripe mangos and papayas, boiled carrots, bread, tortillas, chapattis, yoghurt and slices of cheese (where available).

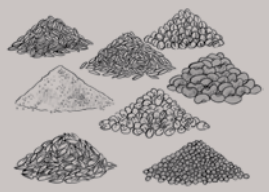
Child's complementary feeding needs overview

Child's age	Frequency	Amount	Density/texture
At 6 months 	2 times per day	2 or 3 tablespoons	Soft porridge well mashed, dense enough to stay on a spoon
From 7 to 8 months 	3 times per day	An almost full cup (250ml)	Mashed foods + finger foods as tasters (easy to pick up & chew)
From 9 to 11 months 	3 meals per day + 1 or 2 snacks	An almost full cup (250ml)	Finely chopped foods + finger foods

Child's complementary feeding needs overview

Child's age	Frequency	Amount	Density/texture
From 12 to 24 Months 	3 meals per day + 2 snacks	A full cup (250ml)	Family food finely chopped or mashed + finger foods

Use of foods (for a varied and balanced diet)

Porridge made with staple foods 	Porridge can be made by cooking whole or crushed grain or other staple foods such as cereals (sorghum, millet, maize and rice) or roots (potatoes and cassava/manioc) depending on what is locally available and affordable. If porridge is made of cassava/manioc, potatoes or plantain, adding multiple cereals can increase the nutritional value. One measure (cup) of cereal will increase the nutritional quality.
Porridge made with cereals + pulses & oil seeds   	High quality ready-to-use complementary foods can be prepared at home as a "dry mix" from locally available cereals + pulses and oil seeds (if available). Pulses used for complementary foods should have the outside removed to increase digestibility. Advantages of a "dry mix" are: A more nutritious complementary food can be prepared specifically for the infant or young child. As porridge it requires less time for cooking because the ingredients are already roasted. It can be used to easily prepare snacks or "in-between" meals for young children. An ideal "dry mix" contains 4 measures of cereals (sorghum, millet, barley) + 1 measure of pulses (dried beans, peas, lentils) + oil seeds if available (groundnuts, sesame). It is good if each mixture contains at least two types of cereal. For example, it could be made up of 2 measures of wheat + 2 measures of barley or 1 measure of millet, 1 measure of barley + 2 measures of wheat. To prepare the "dry mix": first clean, roast and grind all ingredients separately (cereals, pulses, oil seeds) then mix together in the right amounts. All ingredients can also be purchased from the market in powdered form.
Fats and oils 	Small amounts of butter or oil can be added to the porridge each time to increase energy and to help vitamin absorption.
Fruit and vegetables 	Fruit and vegetables can be given every day to provide the required minerals and vitamins. Mashed dark green leafy vegetables or yellow/orange/red vegetables can be added to the porridge or to any meal. Yellow/orange/red fruits can be given as snacks in between meals. When fruit juices are given to young children, it is better to add a little safe water so they are not too strong. This can avoid an upset stomach.

Animal products



Animal products such as meat, fish, chicken, liver and eggs can be given as often as possible to provide required proteins. Mashed or minced animal products can also be added to the porridge. When possible, animal milk can be used instead of water to cook the porridge. Animal milk should be boiled before being added to the porridge.

Fermented foods



When possible, fermented foods such as yoghurt can be added to the porridge or eaten as snacks. They can help the stomach fight diseases such as diarrhoea.

Note: Salty, spicy and sugary foods are not healthy for young children.

Active feeding



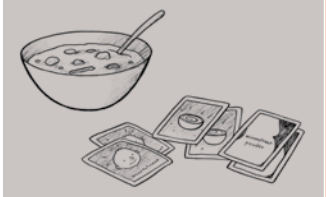
The child needs to get used to eating complementary foods in addition to breast milk. Patience and time are required for active feeding:

- If a spoon is used, the mother can wait for the child to open his/her mouth when offering food.
- Children should be allowed to touch and smell their food, as this is part of their learning.
- Talking and interacting with the child during feeding will help the development of speaking and learning.

Singing songs, using games or telling stories can make eating more enjoyable. If the child refuses many foods, it is good to experiment with different food combinations, tastes and textures rather than insist on the same foods. If the child has a small appetite, it is best to offer favourite foods and encourage him/her to eat rather than force the child to eat what he/she does not like. A child should be fed directly up to 12 months of age. After this, mothers still need to be present to help the child eat. A young child should not be left alone while eating to ensure the right amount of food is taken and to prevent the risk of choking. If a child does not finish his/her portion, it should be set aside to be eaten later, rather than finished by other family members.

Behaviour 9 – Ensure the child gets adequate iron, vitamin A and iodine in the diet.

Starting from six months





A child needs **iron** to develop physically and mentally and to prevent anaemia (tiredness). Foods rich in iron are dark green leafy vegetables, meat, liver and kidney. Yellow/orange fruits and vegetables are called “iron helpers” as they help the body use the iron.
A child needs **vitamin A** to fight diseases and prevent eye problems. Foods rich in vitamin A are dark green leafy vegetables, yellow/orange fruits and vegetables, liver and kidney.
A child needs **iodine** to develop physically and mentally and to prevent learning and growth problems. Try to add very small amounts of iodized salt to porridge or to every meal.
Some commercial products such as flour and/or vegetable oil have vitamins and minerals added. These are called “fortified foods” and they are marked with a special logo to help recognize them. They can be used to prepare the porridge.
Micronutrient powders may be available in small packets for easy addition to porridge or other foods, especially for young children between 6 and 12 months.

Absence of disease

For infants and young children, even more than for adults, illness or disease combined with a poor diet can result in malnutrition. Addressing health issues common to infants and young children is therefore very important.

Key messages

Young children are especially vulnerable to illness and malnutrition, particularly those under the age of two, since growth and good health are so important at this time. Common illnesses, such as those caused by malaria, diarrhoea, intestinal worms and severe coughs or breathing difficulty, can cause vulnerability to malnutrition or make malnutrition worse. These illnesses should be treated by health workers. Use of mosquito bed nets and hand washing with soap or ash are simple but effective preventive measures. Infants or young children with diarrhoea should drink plenty of breast milk, and older children should drink extra fluids, such as safe water. Oral rehydration salts may be advised for use by a health worker. Serious colds and coughs may develop into pneumonia; the advice of a health worker should be sought if a young child has difficulty breathing or is coughing for more than two weeks.

Detailed guidance on disease prevention can be found in the CBHFA manual, Module 6. A few guidelines are provided below:

Behaviour 1 – Prevent and treat malaria simply and effectively.

Starting from birth



Malaria burns up energy and the child loses a lot of fluids from the body through sweating. For this reason:

- Infants up to six months need to be breastfed frequently and exclusively.
- Children from six months need to be given extra foods and drinks in addition to breast milk.

Frequent malaria infections can slow growth and brain development and cause anaemia. A child who has had malaria several times should be checked for anaemia by a trained health worker and treated accordingly.

Malaria is spread by the bite of an infected mosquito. The best ways to prevent mosquito bites are:

- Sleeping with the child under insecticide-treated[20] mosquito nets (which should be dipped in insecticide every six months).
- Dressing the child in clothes that cover as much of the body as possible, especially between sunset and sunrise.

Malaria might be suspected if anyone in the family has a fever or if the child refuses to eat, vomits frequently, is sleepy or has convulsions.[21] All fever in areas with malaria should be treated immediately, within 24 hours of onset, with medicines provided by health centre staff. When given the treatment by a health worker, the child needs to take the full amount of prescribed medicines, even if the fever disappears. If the treatment is not completed, the medicine to treat the malaria might work less well. The malaria may then become more severe and difficult to treat. Medicines should be taken with safe water.





20 *The net is covered in a substance that repels or kills mosquitoes on contact with the net.*

21 *A twisting or shaking (contortion) of the body caused by violent, involuntary contractions of the arms, legs, torso and/or head.*

Behaviour 2 – Prevent and treat diarrhoea simply and effectively.

Starting from birth



Germs cause diarrhoea. Germs are small organisms often found in human and animal excrement that usually spread through contaminated water. Germs can also be spread by food, fingers and flies.
For the first six months, exclusive breastfeeding is the best way to protect the child against diarrhoea.
Simple ways to keep the environment clean and ensure good hygiene include:

- Washing hands with water and soap or ash after touching stools and before breastfeeding, preparing foods and feeding the child and after toilet use.
- Washing the child's hands with water and soap or ash often and keeping the child's play area and toys clean at all times.
- Feeding the child with a clean, open cup. Feeding bottles are difficult to clean.
- Protecting food and drinking water from flies.
- Never eating leftovers of cooked foods after two hours, unless they are kept in a refrigerator.
- Keeping the child's finger nails short.

If a young child gets diarrhoea, the child should immediately be given extra fluids, especially breast milk.
Oral Rehydration Salts (ORS) (new formula) properly mixed with safe water is the best treatment for diarrhoea. ORS packets are commonly available from local health facilities.[22] A health worker may also provide zinc supplements to the child for 14 days to help the child recover faster and prevent episodes of diarrhoea in the next three months. Diarrhoea usually stops after three to four days. If not, the child should be taken back to the local health facility for advice.
The life of a child is in danger if there are several watery stools and vomiting within an hour or if there is blood in the stools. Other warning signs include fever, loss of appetite, sunken eyes, extreme thirst, lethargy, and diarrhoea lasting more than one week.

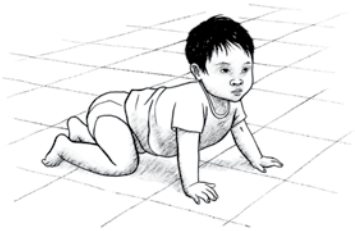
Behaviour 3 – Prevent intestinal worms simply and effectively.

Starting from birth



Intestinal worms can enter the body through the mouth when eating with dirty hands or when consuming food or water containing worms or worm eggs. Young children put their hands in their mouths constantly so it is best to wash their hands with water and soap or ash often. Keep the child's finger nails short. It is best to keep the child's play area and toys clean at all times. Fruit and vegetables should be washed with safe water (from protected sources, boiled or purified) or peeled or cooked with a little water. Meat should be well cooked. Intestinal worms can also enter the body through skin contact with soil containing worms or worm eggs. Wearing shoes can prevent this.







22 *ORS replenish a child's loss of salts and fluids caused by diarrhoea. If packets of ready-made ORS are not available, they can be made with six level teaspoons of sugar and half a level teaspoon of salt dissolved in one litre of safe water and/or soup. Too much sugar can make the diarrhoea worse and too much salt can be harmful to the child. http://rehydrate.org/solutions/homemade.htm#recipes*

Behaviour 4 – Prevent and treat pneumonia simply and effectively.

Starting from birth	Droplets released into the air by coughing or sneezing transmit germs that cause pneumonia. Covering one's mouth and nose (for example with one's shoulder) when coughing or sneezing can prevent the spread of germs. Ensure that infants and young children receive all recommended immunizations, have good nutrition and live in a smoke-free environment. This can protect the child against pneumonia. A child with a cough needs to be kept warm but should be taken to the health facility immediately if breathing becomes fast or difficult. Other warning signs include coughing continuously for more than two weeks, inability to drink or breastfeed and frequent vomiting. If medicines such as antibiotics are given, they need to be taken for as long as the trained health worker prescribes them, even if the child looks better.

Appropriate caring practices

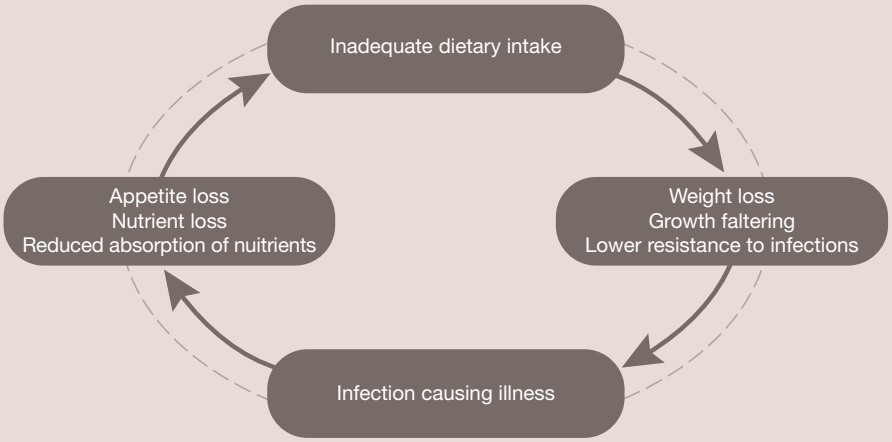
Caring practices for infants and young children can be influenced by local customs, traditions and beliefs. Some caring practices have been shown to help give infants and young children the best chances for good growth, health and learning. A loving and caring family environment, along with special attention during times of illness, and practices that help the mental development of infants and young children are all important.

Key messages

Infants and young children normally grow and develop quickly. Several illnesses a year can slow or interrupt the growth of an infant or young child. Good infant and young child feeding and caring practices are critical for normal child growth and weight gain. These can be promoted with messages, but often discussion and advice on feeding practices and follow-up by community health workers or volunteers are important, as are referral and treatment if the child is ill. For infants up to six months, breast milk is the only food and drink needed to recover from illness. Young children may need extra meals or snacks for two weeks to regain weight. The most important ways an infant or young child develops and learns is through interaction and stimulation. This means cuddling, talking, singing, reading and playing. Boys and girls have the same physical, mental, emotional and social needs and have the same capacity to learn. Both have the same need for affection, attention and approval. The father's role is important to ensure a caring environment.

If a child is not growing well and gaining weight rapidly, he/she may be affected by a cycle of infection (or illness) and malnutrition (see diagram on following page). To break or reverse the cycle, children need to be well fed, and mothers need to take preventive health measures.

The infection – malnutrition cycle



Behaviour 1 – Ensure the child is growing well and gaining weight rapidly.

From birth up to at least two years



Infants and young children normally grow and develop quickly. Good infant and young child feeding and caring practices are critical for child growth and weight gain. These can be promoted with messages, but discussion and advice on feeding practices and follow-up by community health workers or volunteers are also important, as are referral and treatment if the child is ill.
To monitor whether growth is in the normal range, it is usual to weigh a child monthly. Weighing can be conducted at the local health facility or sometimes in the community.

Monthly weighing helps identify if a child is:
- not gaining weight
- losing weight
- underweight or severely underweight.

Growth promotion counselling, especially if the child's growth has faltered (slowed less than typical for the age), is important.

Behaviour 2 – Feed the child adequately during and after illness.

Up to six months



During illness, an infant needs frequent breastfeeding to help recover and to avoid losing too much weight. During illness, an infant loses a lot of water and minerals through stools or sweating and is at risk of "drying out" or "dehydration". This can be prevented by continuing to breastfeed as often and as long as possible. Breast milk is the only food and drink an infant needs to recover. Giving water or other fluids can make the illness worse. During illness, it is normal for an infant to lose weight. After illness, the infant will need to breastfeed more and for longer to fully regain the lost weight.

From six months



During illness, especially diarrhoea or measles, it is common for a child to lose appetite and not use food effectively. Several illnesses in a year can slow or interrupt a child's growth. Continuation of breastfeeding and complementary foods can help the child to fight illness, increase strength and reduce weight loss. Breastfeeding is the best way to prevent dehydration. Additional fluids can be given after breastfeeding.
After illness, the child will need at least one extra meal every day for at least two weeks to fully regain health and weight:

- Nutritious foods that the child likes can be offered in small portions and as often as possible, especially if the child has lost appetite.
- The food can be enriched with a little oil or butter to increase energy.
- Mashed or soft foods are good for when the child cannot swallow.
- Soups, watery porridge or foods made thinner with water are not good during and after illness because they fill the stomach but do not provide enough energy and nutrients.

Behaviour 3 – Give the child affection, attention and stimulation to help him/her grow and learn quickly.

Starting from birth



An infant will start to learn quickly from birth. **Immediate breastfeeding** and skin-to-skin contact are the basis for the mother and child to bond. Breastfeeding on demand will give the infant a sense of security. The infant needs to suckle for both nutrition and comfort.
Interaction and stimulation through cuddling, talking, singing, reading and playing are the most important ways a child develops and learns. Active feeding stimulates the child through touch, hearing, smell, sight and taste. A child uses these to explore the surrounding world. Boys and girls have the same physical, mental, emotional and social needs and have the same capacity to learn. Both have the same need for affection, attention and approval. The **father's role** is especially important in creating a loving environment. Fathers can help with domestic tasks, particularly when the mother is pregnant or breastfeeding.
Special needs: children who are anaemic, malnourished or frequently sick may get upset more easily than healthy children. They need special attention and encouragement to eat so they can recover faster and properly.

What health and nutrition services are needed?

This section provides an overview of health and nutrition services for infants and young children, organized according to age group.

Key messages

The availability of health and nutrition services may vary from one country (or even district) to the next depending on existing policies and programmes. Many of these services may be available free of charge for children up to five years. Volunteers should know what exists in their area and how to refer people to these services.

The term "supplementation" refers to the provision of additional vitamins and minerals (often in tablet form) to balance the diet.

Health and nutrition services

Up to six months	**Clinic or home birth counselling on newborn care** To ensure the infant's survival in the first critical hours and days after birth, counselling is often provided on clean cord-cutting and care, washing infants in warm water, immediate breastfeeding, and keeping infants warm. Some programmes promote early and exclusive breastfeeding and discourage distribution and use of breast milk substitutes (for more information, see *CBHFA manual, Module 6*). **Postnatal care (after birth)** The following services are directly linked to nutritional benefits: **Immunization** should be provided routinely within the first six months of birth (and according to National Schedules, see *CBHFA manual*, *Module 6*). **Growth monitoring and promotion** consists of monthly weighing at health-facility or community level and checking for adequate growth. These programmes also include the promotion of exclusive breastfeeding, the detection of warning signs for baby/mother, and timely referral for the treatment of acute malnutrition. Counselling for mothers on breastfeeding and caring practices should be provided.
From six months to five years	**Measles immunization** Routine measles immunization with two doses should be provided when the child is 9–18 months of age. Measles campaigns for catch-up immunization are provided where there are outbreaks of the disease or not enough children are immunized. Immunization of all children under 12 years of age may be advised during an emergency caused by a disaster or conflict (see also *CBHFA manual, Module 6*). **Supplementation of vitamin A** Routine supplementation of vitamin A should normally be provided every six months. During special supplementation campaigns (usually conducted alongside other services), vitamin A is provided on an as-needed basis, where not enough children have received it routinely. Immediate vitamin A supplementation is provided when a child has measles (see *CBHFA manual, Module 6*). **De-worming (children *from two years*)** Routine de-worming every six months is often carried out for children from two years of age (see *CBHFA manual, Module 6*). Bi-annual de-worming campaigns (usually conducted alongside other services) may be provided when routine coverage is low. **Supplementation of iron and folic acid** Preventive supplementation, with crushed tablets, may be provided for infants and young children with low birth weight. (See *CBHFA manual, Module 6*.) **Growth monitoring and promotion** Growth monitoring and promotion consist of monthly weighing at health-facility or community level and checking for adequate growth. Included for this age group is counselling on exclusive breastfeeding and good complementary feeding and childcare practices. **Behaviour change and nutrition education messages** Community health workers and/or volunteers reinforce messages and explore challenges faced by mothers to support the adoption of best family and infant and young child dietary and feeding practices. Common communication techniques include support groups for mothers at the community level. Radio stations and theatre groups deliver messages on better nutrition practices, and mobile networks may even be used to send nutrition-related text messages.

What can volunteers do?

Volunteers can play a useful role in the promotion of good nutrition at community and household level, where they can encourage people to change their behaviours and adopt safe and healthy practices.

Volunteers can be actively involved in teaching women about the benefits of an adequate diet, the absence of disease, and appropriate caring practices for good infant and young child nutrition. Fathers and community leaders need this information as well.

Volunteer activities

For mothers and the community 	• Promote key behaviours for an adequate diet, disease prevention and treatment, and appropriate caring practices. • Raise awareness of available health and nutrition services. • Identify and address key challenges to recommended behaviours at household and community levels
For mothers with babies up to six months 	• Promote early initiation of exclusive breastfeeding. • Support the establishment of mother-to-mother support groups for exclusive breastfeeding.
For mothers with young children from six months up to at least two years 	• Promote appropriate complementary feeding in addition to breastfeeding. • Support the establishment of mother-to-mother support groups to provide better complementary feeding practices.

Section 4 at a glance

From birth up to at least two years

Key behaviours for adequate diet

Exclusive breastfeeding (up to six months)	Optimal breastfeeding (up to at least two years)	Complementary feeding (from six months up to at least two years)	Health and nutrition services
• Place the infant on the breast within one hour of birth, with skin-to-skin contact. • Ensure the infant consumes the thick yellow milk (colostrum) produced directly after birth. • Give the infant ONLY breast milk for the first six months.	• Allow the infant to breastfeed on demand, day and night. • Ensure correct positioning and attachment of the infant at the breast. • Continue breastfeeding, even when unwell.	• Introduce the child to foods in addition to breast milk at six months. • Provide sufficient and appropriate complementary foods from six months up to at least two years with attention to recommended feeding practices and alongside continued breastfeeding. • Ensure the child gets adequate iron, vitamin A and iodine in the diet.	• Clinic and home birth newborn advice. • Breastfeeding support. • Supplementation of vitamin A. • Supplementation of iron and folic acid tablets.

Key behaviours

For absence of disease	For appropriate care	Health and nutrition services
• Prevent and treat malaria simply and effectively. • Prevent intestinal worms simply and effectively. • Prevent and treat diarrhoea simply and effectively. • Prevent and treat pneumonia simply and effectively.	• Ensure the child is growing well and gaining weight rapidly. • Feed the child adequately during and after illness. • Give the child affection, attention and stimulation to help him/her grow and learn quickly.	• Clinic and home birth newborn advice. • Breastfeeding support. • Immunization (including measles). • Growth monitoring and promotion. • Behaviour change and nutrition messaging. • De-worming (from two years).

5. Toolkit

Detection and referral tool

Timely detection and referral of children with acute malnutrition

By using this tool you will:

- Be able to screen a child for acture malnutrition by checking for oedema or using the MUAC tape.
- Know if a child is acutely malnourished based on signs of oedema or MUAC interpretation.
- Understand why and where a child with acute malnutrition should be referred.

Screening for acute malnutrition can be carried out at many health facilities, including children's hospital wards, immunization points, community outreach points, antiretroviral therapy (ART) treatment sites, young child clinics, counselling units and psycho-social support groups.

Volunteers can learn how to recognize visible signs of acute malnutrition in their communities through training in how to screen children using **mid-upper arm circumference (MUAC)** tape and a simple check for oedema.



Checking for nutritional oedema

Nutritional oedema occurs when the body keeps too much water because it does not get the right nutrients. It is always a severe form of acute malnutrition and presents as swelling of both feet. Children with nutritional oedema are at high risk of death.

Steps for determining signs of oedema:
- Apply gentle finger pressure to *both* feet for 3 seconds.
- Lift the fingers.
- If a shallow print or "pit" remains on both feet, the child has oedema.

Oedema starts with both feet and lower legs but can spread to the entire body. Oedema is classified at three levels from least to most severe:
- Oedema below the ankles.
- Oedema on both feet and legs, below the knees.
- Oedema on both feet, legs, arms and sacral pad and eye lids.

Note: Regardless of the level of severity, volunteers should refer a child with signs of oedema to a health/nutritional centre.

Screening for marasmus using MUAC measurement

MUAC stands for mid-upper arm circumference and measuring it is a quick and simple way to determine whether a child is acutely malnourished or not using a simple coloured plastic strip.

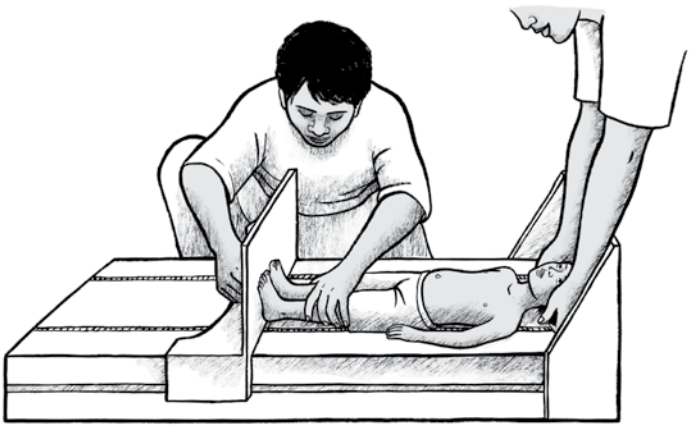
The method does not cause any pain and can be used as an alternative measurement to weight-for-height, which might be more stressful for the child.

MUAC is suitable for use on children over six months (length over 65 cm) and children below five years (height under 110 cm).

A simple wooden stick 110 cm long can be used to select children less than five years. Boys and girls are measured in the same way.

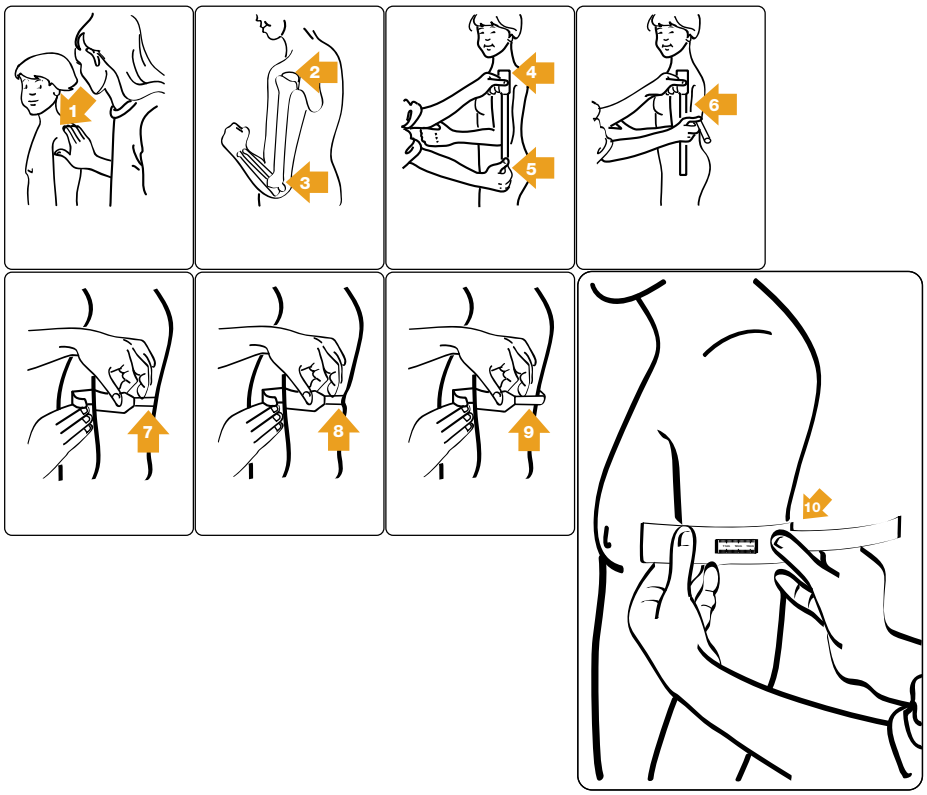
MUAC screening is only suitable for identifying acute malnutrition which is related to high risk of death if untreated. MUAC can *not* be used for growth monitoring or for finding out if a malnourished child is recovering from treatment.





Steps for screening using MUAC tape (below)

1. Keep your work at eye level. Sit down or kneel when possible. Young children should be held by the mother during the measurement.
2. The measurement should be done on the left mid-point upper arm. The mother should remove clothing that may be covering the child's arm.
3. Firstly, **determine the mid-point of the child's left upper arm**. The following four steps will help you do that:
   - Locate the tip of the shoulder with your finger tips (Arrow 1).
   - Determine the tip of the shoulder (Arrow 2) and the tip of the elbow by bending the child's elbow to make a right angle (Arrow 3).
   - Place the beginning of the measuring tape (at zero) on the tip of the shoulder (Arrow 4) and pull the tape straight down past the tip of the elbow (Arrow 5).
   - Determine the mid-point between the elbow and the shoulder by reading the number at the tip of the elbow to the nearest centimetre and dividing this number by two. Mark the mid-point with a pen on the arm (Arrow 6).
4. Straighten the child's arm and let the arm hang relaxed at the side of the body.
5. Wrap the tape around the mid-upper arm and make sure you can read the numbers (meaning they are the right way up). The tape should be flat around the skin and have the correct tension (Arrow 7).
6. Make sure the tape is not too tight (Arrow 8).
7. Make sure the tape is not too loose (Arrow 9).
8. Once the tape is in the correct position on the mid-upper arm with the correct tension, read and call out the measurement in centimetres to the nearest 0.1 cm (Arrow 10).



Interpretation of MUAC indicators

(Note: New cut off points were introduced in 2009 and should now be used by all organizations.)

Children aged 6 months (over 65 cm) to 5 years (under 110 cm):

Results of measuring with MUAC

Nutritional status	MUAC coloured tape	MUAC in centimetres (cm)	MUAC in millimetres (mm)	Required action
Severe acute malnutrition	RED	Less than 11.5 cm	Less than 115 mm	Refer/admit to the nearest health facility with therapeutic feeding
Moderate acute malnutrition	ORANGE/ YELLOW	11.5–12.4 cm	115–124 mm	Refer/admit to the nearest health facility with supplementary feeding or to a supplementary feeding programme
Mild or no acute malnutrition	YELLOW/ GREEN GREEN/WHITE	Greater than or equal to 12.5 cm	Greater than or equal to 125 mm	Counselling to prevent malnutrition or to maintain good nutrition

Pregnant and breastfeeding women and other adults (including people living with HIV)

Results of measuring with MUAC

Nutritional status	MUAC in centimetres (cm)	MUAC in millimetres (mm)	Required action
Acute malnutrition in pregnant and breastfeeding women	Less than 21 cm	Less than 210 mm	Refer/admit to the nearest health facility with supplementary feeding or to a supplementary feeding programme
Moderate acute malnutrition in adults/ people living with HIV	16.0–18.5 cm	160–185 mm	Refer/admit to the nearest health facility with supplementary feeding or to a supplementary feeding programme
Severe acute malnutrition in adults/people living with HIV	Less than 16.0 cm	Less than 160 mm	Refer/admit to the nearest health facility with therapeutic feeding or to a therapeutic feeding programme
At risk of acute malnutrition in adults/ people living with HIV	18.5–21 cm	185–210 mm	Counselling and follow-up to prevent acute malnutrition

Setting up a referral system for acute malnutrition

Underlying principles

- Acute malnutrition can be identified in peripheral health facilities such as health posts or in the communities before complications start.
- Children with severe acute malnutrition are in great danger of dying if not immediately referred to a facility with therapeutic feeding on an in-patient and/or out-patient basis.
- Whenever a referral for severe acute malnutrition is made, caregivers need to understand the life-saving importance of going immediately to the recommended facility where the child will be fully assessed to determine the type of treatment.
- For children with moderate malnutrition, it is always necessary to find out the *causes of malnutrition*. If due to chronic diarrhoea or other illnesses and/or incorrect feeding and caring practices, the food ration alone will not be enough to improve their nutritional status.

Detection, referral and admission of severe acute malnutrition

Level	Role
Volunteers	• Checking the presence of nutritional oedema. • Taking MUAC measurement. • Referring children with acute malnutrition to sites with treatment services. **Note:** Children with nutritional oedema or extreme thinness/wasting, infants less than six months old who are visibly wasted and children presenting with oedema should be taken immediately to a health/nutrition centre for treatment.
Health facility with out-patient therapeutic feeding treatment	• Confirming malnutrition screening results (checking the presence of oedema and/or taking MUAC measurement). • Testing the child's appetite. • Checking for medical complications. • Admitting children with severe acute malnutrition without medical complications to out-patient treatment. • Referring children with severe acute malnutrition with medical complications to in-patient treatment.
Health facility with in-patient therapeutic feeding treatment[23]	• Admission to in-patient treatment. • Diagnosis and treatment for medical complications.

Referral forms for children with acute malnutrition

Community volunteers and health extension workers from health facilities without treatment services should locate the nearest sites to refer cases with acute malnutrition.

Referral should be done in writing using a standard form, wherever possible. Caregivers must take the referral form with them to the recommended facility and present it on arrival.

23 *Hospitals and health centres normally have both out-patient and in-patient services.*

A referral letter/form must contain the following essential elements:

Referral form for children with acute malnutrition

Date screened: _____

Parent's/caregiver's name: _____

Child's name: _____

_____

Age: _____ Sex: _____

Town: _____

Village: _____

MUAC (cm, mm or colour): _____

Presence of oedema: _____

Facility referred to: (indicate nearest centres) _____

_____

Other observations: _____

_____

_____

Teatment provided (if any): _____

_____

_____

Personal notes

The Fundamental Principles of the International Red Cross and Red Crescent Movement

Humanity The International Red Cross and Red Crescent Movement, born of a desire to bring assistance without discrimination to the wounded on the battlefield, endeavours, in its international and national capacity, to prevent and alleviate human suffering wherever it may be found. Its purpose is to protect life and health and to ensure respect for the human being. It promotes mutual understanding, friendship, cooperation and lasting peace amongst all peoples.

Impartiality It makes no discrimination as to nationality, race, religious beliefs, class or political opinions. It endeavours to relieve the suffering of individuals, being guided solely by their needs, and to give priority to the most urgent cases of distress.

Neutrality In order to enjoy the confidence of all, the Movement may not take sides in hostilities or engage at any time in controversies of a political, racial, religious or ideological nature.

Independence The Movement is independent. The National Societies, while auxiliaries in the humanitarian services of their governments and subject to the laws of their respective countries, must always maintain their autonomy so that they may be able at all times to act in accordance with the principles of the Movement.

Voluntary service It is a voluntary relief movement not prompted in any manner by desire for gain.

Unity There can be only one Red Cross or Red Crescent Society in any one country. It must be open to all. It must carry on its humanitarian work throughout its territory.

Universality The International Red Cross and Red Crescent Movement, in which all societies have equal status and share equal responsibilities and duties in helping each other, is worldwide.

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