MODULE 2: NUTRITION & HEALTH

Introduction

When workers were interviewed as part of the baseline survey, they were only able to describe a limited number of signs and symptoms of malnutrition. This poses a risk to the timely identification of malnutrition in the community setting. To address this, this module explains the different forms of malnutrition, how it can be identified and what the main nutrient deficiencies are - which gives us an insight into the prevention of malnutrition.

This module therefore explores the link between nutrition and health for the most vulnerable groups in society: (young) children, pregnant women, and the sick. It explains how to care for young children and what the special nutritional needs are of pregnant women. The final section looks at how optimal nutrition and attention to sanitation and hygiene can help prevent diseases.

The baseline survey revealed that there is clearly scope to prevent diseases better in the tea estates covered by the study. For example, around 40% of those interviewed did not boil water before consuming it with most of them believing that un-boiled water is clean. At the same time, it was found that 19% respondents had a household member who had suffered from diarrhoea in the month preceding the survey. In order to control worm infestation, 88% of the respondents routinely had their children de-wormed. In addition, 81% of respondents had a household member suffering from malaria.

Objectives of the module

After having completed this module, participants should be able to:
1. Describe the causes and dangers of under-nutrition
2. Describe how to care for under-nourished children
3. Explain how to prevent under-nutrition and diseases
4. Pass on recommended infant and young child feeding practices
5. Support the community to implement hygiene and sanitation practices

Overview

1. Overview of malnutrition
2. Causes of under-nutrition
3. Forms of under-nutrition
4. Wider impact of under-nutrition
5. Family and community prevention of under-nutrition
6. Tips for optimal infant and young child feeding
7. Nutrition during pregnancy & breastfeeding
8. Disease prevention & sanitation and hygiene
2.1. OVERVIEW OF MALNUTRITION

The term ‘malnutrition’ refers to two conditions: under-nutrition or over-nutrition. Over-nutrition is a condition that results from eating food in excess of body requirements. In such circumstances, individuals tend to become overweight or obese. Under-nutrition results from not eating enough to supply the body with all the required food nutrients. In this situation, affected individuals lose weight, frequently fall sick and become deficient of some macro- and micronutrients. In children, physical growth and mental development can be severely affected. Here the main focus will be on under-nutrition given that it is the bigger challenge in our communities.

2.2. CAUSES OF UNDER-NUTRITION

Many factors can cause under-nutrition as summarized below. Most of these relate to eating diets low in nutrients, severe and repeated infections, not feeding children as recommended, poor household and environmental hygiene, failure to treat household members on time and failure to care and attend to all household members. Some of these factors are in turn related to low understanding of how we should feed, poverty, and the lack of food at household level (household food insecurity).
2.3. FORMS OF UNDER-NUTRITION

Under-nutrition manifests itself in 4 different forms:

- Acute under-nutrition or thinness
- Underweight
- Stunting
- Micronutrient deficiencies

1. Acute under-nutrition

Acute under-nutrition is a condition characterized by weight loss, wasting, and in very severe cases the swelling of both feet with fluids (bilateral pitting edema). It is called acute because its causes may be sudden and individuals develop related signs within a few days. In most cases the child is already under-nourished/underweight and if it then suddenly gets sick with fever and diarrhoea, the condition may become ‘acute.’

Health workers further differentiate between two forms of severe acute malnutrition: marasmus (non-edematous malnutrition) and kwashiorkor (edematous malnutrition). The relationship between under-nutrition and external factors can be seen in the following figure:
Figure 2.1: Common Causes of Malnutrition in Communities

**Box 1: Marasmus/non-edematous Malnutrition**

This condition can arise due to STARVATION (prolonged hunger) with or without DISEASE.

Marasmus is a sign that a child is not eating enough food needed for their body. A child may get marasmus at any age although it is commonly seen in children under 1 year.

**Signs of a child with Marasmus**
- The child’s weight is low
- The child has appetite for food
- Child is alert and has an eager face as if expecting something
- The child looks like an old person or has a monkey face
- Skin appears too large for the body, forming folds below the buttocks
- The stomach looks like an empty sack
- Hair changes from black to yellowish
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<tr>
<th>Box 2: Kwashiorkor/edematous malnutrition</th>
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<tr>
<td>Kwashiorkor normally happens in children between 6 months and 3 years. This condition is usually seen in children who have stopped breast feeding and are mainly fed on energy-giving foods with <strong>minimal protein content</strong>.</td>
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<table>
<thead>
<tr>
<th>Common Signs and Symptoms of Kwashiorkor</th>
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<tr>
<td>- Swelling (pitting edema) of feet, hands and face</td>
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<tr>
<td>- Thin/ reddish hair which can be pulled out easily</td>
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<tr>
<td>- The child’s muscles are weak and wasted, especially in the upper arms, thighs and the neck</td>
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<tr>
<td>- Child has no interest in their surroundings</td>
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<tr>
<td>- Skin loses colour and becomes lighter, peels off and develops sores</td>
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<tr>
<td>- Children develop pot bellies</td>
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2. Underweight

An individual is underweight when he/she has low weight compared to the average weight of healthy individuals of the same age and sex. It may develop slowly or suddenly depending on the cause of malnutrition.

Underweight children can be identified easily if their age is known. Parents/carers who are worried about their child’s weight or growth are advised to visit a health centre on a monthly basis so that health workers can monitor the child’s weight.

3. Stunting

Stunting is a form of under-nutrition where a person is too short for his/her age compared to other healthy individuals of the same age and sex (< -2 standard deviations below the growth reference). It may be as a result of long term inadequate food intake, frequent illnesses, inappropriate feeding practices and/or poor absorption of nutrients in the body. This condition reflects growth failure and is irreversible if not addressed within the first two years of the child’s life. In some communities more than half of the children may be stunted. This makes it difficult for people to recognize this as a problem. However, the consequences of stunting are very serious: they affect the child’s mental and physical development, will lead to poorer results in school and a lower income-earning capacity later on in life.
4. Micronutrient deficiencies

As covered in module 1, vitamins and minerals, also known as micronutrients, are a critical component of good nutrition. In particular, folate (vitamin B9), iodine, iron, vitamin A, zinc, and other B vitamins including thiamin (vitamin B1), riboflavin (vitamin B2), niacin (B3), cobalamin (vitamin B12) and pyridoxine (vitamin B6) are important for healthy and productive populations.

Without them, babies may be born with birth defects (because of their mothers’ deficiencies), children can develop blindness and an inability to learn properly, among other long-term disabilities. Each year, more than one million children under five die from vitamin A and zinc deficiencies around the world. Vitamin and mineral deficiencies affect up to two billion people.

Prolonged failure by individuals to eat foods rich in vitamins and minerals may lead to the development of vitamin and mineral deficiency disorders. Manifestations of vitamin and mineral deficiencies take long to develop and individuals may not realize that they are affected. By the time signs are seen, the conditions are in advanced stages; for this reason, vitamin and mineral deficiencies are also referred to as hidden or silent hunger. In order to combat some of these deficiencies, children are given vitamin A supplements, women are given iron/folic acid supplements when pregnant and people are advised to use iodized salt in food preparation.

Micronutrient deficiencies that constitute a public health concern in Uganda:

a) Vitamin A deficiency

The body’s immune system needs vitamin A in small amounts to help fight infections. Vitamin A is also important for proper growth and reproduction. Insufficient vitamin A impairs vision. Vitamin A deficiency is the leading cause of blindness in children. Globally, an estimated 250,000 to 500,000 vitamin A-deficient children become blind every year. Half of these children die within a year of becoming blind. Vitamin A deficiency also causes night blindness and increases the risk of child deaths, especially from diarrhoea and measles, as well as maternal deaths. In Western Uganda, 44 of every 100 children between 6 months and 5 years are not adequately fed on foods rich in Vitamin A. Consequently, 30% of these children suffer from Vitamin A deficiencies.

b) Iron deficiency

Iron is a mineral that, combined with a protein in our blood, carries oxygen throughout our body. It is absolutely critical to growth and development and ultimately to survival, and our bodies store it in several places. Women need more iron than men. During pregnancy, the growing baby also requires iron that is taken from the mother’s blood and iron stores.

In its more severe stages, iron deficiency causes anaemia. Anaemia is defined as a low blood haemoglobin concentration. Apart from a deficiency of iron in the diet, anaemia may also result from other causes, such as severe blood loss, other micronutrient deficiencies or

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heavy intestinal worm infestation. Iron deficiency also impairs brain development and increases maternal and child mortality. Globally, more than 130,000 women and children die each year because of iron deficiency anaemia. In Uganda, it is estimated that 50% of children under 5 years and 24.2% of women of reproductive age are anaemic. In Western Uganda, 39 of every 100 children are believed to be anaemic.

c) Iodine deficiency

Eighteen million children per year are born with impaired mental abilities around the world because of iodine deficiency. Nearly two billion individuals have insufficient iodine in their diets, including one third of all school age children. Populations with chronic iodine deficiency showed a reduction in their intelligent quotient (IQ) of 12.5 to 13.5 points.

Iodine is a mineral essential for human development and growth. Our bodies need iodine to produce the hormones that regulate the thyroid gland. The most commonly known sign of iodine deficiency is goitre, the swelling of the thyroid gland in the neck. Iodine deficiency primarily affects the developing brain. If a pregnant mother is severely iodine deficient, this may lead to cretinism in her baby, the most serious form of mental retardation and associated physical disabilities.

d) Zinc deficiency

The human body relies on zinc to perform many functions including healing of wounds, growth and repair of tissue, proper clotting of blood, correct thyroid function, metabolism of proteins, carbohydrates, fats and alcohol, foetal development and sperm production. The symptoms of severe deficiency include retarded growth, diarrhoea, mental disturbances and recurrent infections.

Zinc supplementation trials conducted over the last few decades in children from developing countries have indicated improved growth rates and reductions in incidences of diarrhoea, pneumonia and various infectious diseases.

e) Vitamin B12 deficiency

Deficiency of Vitamin B12 (cobalamin) causes neurological deterioration, a specific form of anaemia, and possible impaired immune function among other health consequences. In infants and young children it can severely delay their development.

f) Other Vitamin B deficiencies: thiamine (B1), riboflavin (B2) and niacin (B3), pyridoxine (B6) and cobalamin (B12)

Vitamin B deficiencies are highly prevalent in many developing countries, especially where diets are low in animal products, fruits and vegetables, and where cereals are highly milled prior to consumption. Pregnant and lactating women, infants and children are most at risk of vitamin B deficiencies. Severe thiamine deficiency can result in potentially fatal heart failure or peripheral neuropathy. Early symptoms of riboflavin deficiency can include weakness, fatigue, mouth pain, burning eyes and itching. More advanced deficiency can cause brain dysfunction.

Niacin (B3) deficiency can result in pellagra, which causes skin rashes. Other symptoms include vomiting, diarrhoea, depression, fatigue and loss of memory. Symptoms of severe vitamin B6 deficiency include neurological disorders (i.e. epileptic convulsions), skin changes and possibly anaemia.
g) Folate deficiency

Folate (vitamin B9) plays a key role in cell multiplication and tissue growth. Deficiency of folate during pregnancy increases the risk of giving birth to infants with neural tube defects and possibly other birth defects. Spina bifida and anencephaly, the two most common neural tube defects, occur when the neural tube does not close properly, exposing the baby’s brain or spinal cord to amniotic fluid. Neural tube defects affect an estimated 300,000 or more newborns each year globally. Folate deficiency can also lead to impaired cognitive function in adults. It tends to be more prevalent in populations that consume a lot of cereals (low in folate) and few leafy greens and fruits (high in folate).
2.4. WIDER IMPACT OF UNDER-NUTRITION

The consequences of under-nutrition are not only felt by the affected individuals; other household members and the community are equally affected when many individuals in a particular community are under-nourished.

<table>
<thead>
<tr>
<th>Individual consequences</th>
<th>Family and community consequences</th>
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<tbody>
<tr>
<td>Physical abnormalities/impairments</td>
<td>- Cost associated with the treatment of under-nourished persons</td>
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<tr>
<td>Impaired brain development</td>
<td>- Poor family and community development</td>
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<tr>
<td>Frequent illnesses</td>
<td>- Loss of labour productivity which affects engagement in economic activities and income potential</td>
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<tr>
<td>Death</td>
<td>- Loss of family members and loss of income</td>
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<tr>
<td>Children are unable to grow into productive adults</td>
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2.5. FAMILY AND COMMUNITY PREVENTION OF UNDER-NUTRITION

It is always important that adequate measures are undertaken for all household members to stay healthy. **Prevention** should be the key for optimal health outcomes and is cheaper than treatment.

- All household members should eat adequately with a focus on everyone eating a diverse diet (covering all food groups)
- All household members should receive timely treatment for all diseases, e.g. diarrhoea and malaria
- Maintain individual, family and community hygiene and sanitation
- Babies should be exclusively breastfed for the first 6 months of their life, and given other nutrient-rich foods in addition to continued breastfeeding from 6 months onwards
- The growth of children should be monitored till they are 2 years of age
- Children should get their vaccinations in time
- Children should get a Vitamin A supplement two times per year
- Pregnant women should attend ante-natal services and comply with prescribed iron/folic acid medication
- If parents are HIV positive, their children can be tested at 10 weeks of age so that they can know if they are infected with HIV and they can begin to receive treatment and care

A child with any signs of malnutrition (most typically, loss of weight or swelling of the body) should be taken to a health facility immediately for a medical examination. Also children showing any of the following signs should be seen by a doctor urgently:
• High fever (possible risk of malaria)
• Refusal to feed and being very weak
• Chest infection (cough and difficulty breathing)
• Diarrhoea (more than 3 loose stools a day for two days or more and/or blood in the stool, sunken eyes)
• Vomiting (cannot keep anything down)

2.6. TIPS FOR OPTIMAL INFANT AND YOUNG CHILD FEEDING

Children under 6 months of age
Breastfeeding is crucial from birth to when children are 6 months old. They should be exclusively breastfed and do not need any other foods or liquids with the exception of medications prescribed by health personnel.

How to practice exclusive breastfeeding:
• As soon as the baby is born, have the midwife put the naked baby between the mother’s breasts, cover her lightly and keep the baby there for at least one hour. Let the baby start sucking.
• The child should be initiated to breastfeeding within one hour after birth
• During these first days, feed the baby often (every 1 1/2 to 2 hours) for short feeding times. Frequent feeding will help the milk to flow sufficiently
• Breastfeed for a longer time at each feed as the child grows older
• Let the baby empty one breast at a time. This will ensure that the baby gets the most nutritious and satisfying milk. If still hungry, offer the baby the other breast
• Ensure correct positioning and attachment of the baby to the breast as this helps to ensure that the baby sucks well, the mother produces a good supply of breast milk and it prevents the mother from developing sore and cracked nipples
• Breastfeeding the baby often, at least 10 times, day and night, as this helps to produce lots of breast milk to ensure that the baby grows healthy
• Water or pre-lacteals (sugar water or liquids/fluids) are NOT necessary and should not be given to children under 6 months
• The mother should ensure that she eats a diverse diet (containing a variety of foods), maintains personal hygiene and seeks medical attention whenever feeling unwell

Benefits of exclusive breastfeeding
• Breast milk is the only food that is well balanced; there is no other food as good as breast milk for a baby
• Breast milk is inexpensive, always available and does not need any preparation
• Breast milk is sterile/clean. It is therefore completely safe for the baby to drink
• It provides the baby with immunity thus preventing the child from frequent illnesses, such as diarrhoea and respiratory infections
• Breastfeeding initiates bonding between the mother and her child

For a child between 6–24 months old
• Introduce nutrient rich foods and also continue breastfeeding
• Foods should initially be made soft and easy to eat by the child
• It is advisable to introduce one food at a time while monitoring for any likely intolerances to particular foods
• As the child grows to 12 months, gradually introduce the child to the household diet
• Give children small but frequent feeds
• Always ensure that children are fed patiently; they should not be forced to eat
• Children should be encouraged to eat more at every meal, and given an extra meal each day (or extra snacks in between meals)
• Give fluids to drink preferably fruit juices, clean water, yoghurt, milk. However, limit fluid intake before meals as this limits the quantity of food children can eat

Home feeding of a sick child
During illness (malaria, diarrhoea, pneumonia or other) the parent/carer must ensure that they continue feeding the child and increase fluids as follows:
Less than 6 months

- Breastfeed more during illness. This will help the baby fight the illness, recover more quickly and not lose weight. Breastfeeding also provides comfort to a sick baby.
- If the baby refuses to breastfeed, continue to encourage your baby until he or she takes the breast again.
- Give only breast milk and prescribed medicines to the baby.
- If the baby has been very ill, you may need support to re-establish exclusive breastfeeding.
- If the baby is too weak to suckle, either express breast milk and feed by cup or hand express milk directly into the baby’s mouth. This will also help the mother to keep up her milk supply and prevent breast swelling.

More than 6 months

- Increase the frequency of breastfeeding and offer additional food to the child to maintain his or her strength and prevent weight loss.
- Feed the child foods that he or she likes in small quantities throughout the day.
- Take time to patiently encourage the sick child to eat as his or her appetite may be decreased because of the illness.
- Offer the child simple foods like porridge and fruits, even if he or she does not express interest in eating.
- Avoid spicy or fatty foods.
- Do not use bottles, teats or spouted cups, since these are difficult to clean.

During recovery

- When a baby is recovering from an illness, he/she will need to be breastfed and eat more than usual.
- If the child is over 6 months, give him or her one additional meal of solid food each day during the next two weeks after he/she has recovered. This will help your child regain the weight lost during the illness.
- Take enough time to actively encourage your child to eat this extra food and breastfeed more frequently until his or her appetite has returned.
- It is very important that the child gets the vitamin A supplement twice in the year to help the body recover faster.
2.7. NUTRITION DURING PREGNANCY & BREAST FEEDING

Adequate feeding is important for all women of reproductive age but especially when they are pregnant. **Pregnant women should:**

- Eat one extra meal a day during pregnancy in addition to regular meals, and two extra meals during breastfeeding
- Eat plenty of fruits and vegetables with every meal
- Drink enough liquids every day (8 glasses)
- Avoid taking tea or coffee with meals because they interfere with iron absorption and may therefore contribute to anaemia. It is better to drink tea or coffee an hour before or after a meal
- Throughout your pregnancy and for at least 3 months after your baby is born you need iron and folic acid to prevent anaemia. It is better to take iron tablets with meals to increase absorption and avoid potential side effects, particularly nausea
- Always use iodised salt to prevent poor brain development, poor physical growth and goiter. Iodised salt also protects against abortions, miscarriages and stillbirths
- Get a vitamin A capsule from the nearest health facility and take immediately after delivery or within 8 weeks to help build your baby’s immune system through your breast milk
- Take de-worming tablets as prescribed to treat worms and to prevent anaemia
- Do not use alcohol, narcotics or tobacco products. They can damage the unborn baby
- Sleep under an insecticide-treated mosquito net to prevent malaria. Take anti-malaria medication as prescribed by a health worker
- Attend antenatal care at least four times during pregnancy and always follow your health worker’s recommendations

**Special note for the adolescent mother:**
Before the age of 18 your body is still growing. You need extra care, more food and more rest than an older pregnant or breastfeeding mother to enable your body to grow fully and ensure that it produces enough milk for your baby.

2.8. DISEASE PREVENTION & SANITATION AND HYGIENE

1. **Disease prevention through nutrition**

Good nutrition is important to prevent or reduce the duration and impact of many childhood diseases as well as chronic illnesses which may arise at a later age, like diabetes and cancer, and to manage diseases like HIV/AIDS and tuberculosis (TB). It ensures your body’s defence system stays strong and therefore reduces the chance of falling ill.

Eating plenty of protective foods (fruit and vegetables) will help fight off diseases. Ideally, **fruits and vegetables are eaten every day.** Green leaves (like: dodo, nakati, bugga, malakwang, boo, pumpkin leaves, cassava leaves, sukama wiki, spinach) provide nutrients which help boost the body’s defence system. In circumstances when people are already ill, they do not feel like eating as they might have side effects from their treatment, infections in the mouth or lost their appetite. They could be encouraged to eat liquids like soups several times a day.
On the other hand, there are certain foods that we should try to limit consumption of in order to prevent disease:

**Salt:** too much salt can cause high blood pressure. 1-3 grams of salt (just few grains) each day is enough for a child and an adult

**Sugar:** can cause diabetes (high sugar in the blood) and is bad for your teeth and mouth because it can cause thrush and holes in the teeth. 2 tea spoons of sugar or honey each day is enough to meet the daily need for sweetness

**Fried food and processed, pre-packed food:** like oily or fatty foods like chips and deep fried meat or chicken. This can lead to the accumulation of fat in the blood vessels making them thin. This process affects proper blood flow in the body especially blood moving to and from the heart. This can lead to heart related diseases like hypertension (high blood pressure).

**Unhealthy snacks:** like sugary sweets, cakes, buns, chocolate and sweets, which cause holes in the teeth as well as spoil a child’s appetite. Instead of these, give a child fruits (fresh or dried), bread, ground nuts, Gizelli (boiled maize and beans) or Kacumbali (cut tomato and onion salad)

**Sodas:** which are very bad for small children as they damage their teeth and they develop the desire for sweet foods early in life

**Caffeine:** (found in coffee and in smaller doses in tea) when taken too often it can stop the heart from pumping enough blood. Individuals especially children should not take more than 1-3 cups of coffee a day as it is a drug and can affect their ability to sleep well. Pregnant women should take it in moderation as well to protect their unborn baby.

**Alcohol:** it is dangerous for the body when taken in large amounts every day. It can stop body organs from working properly (mainly the liver) and should therefore never be given to children and pregnant women

2. **Disease prevention through hygiene and sanitation**

Also personal and environmental hygiene practices are crucial to prevent and control diseases. The focus in this section is on hygienic food preparation. Once children are not breastfed anymore they lack the immunity protection provided by breast milk.

In addition, from 6 months, children require complementary feeds which puts them at risk of diseases through unsafe food preparation. Key to clean and safe food preparation: clean hands, clean utensils, safe water and food, and safe food storage.

**Clean your hands**
- After using the toilet
- After cleaning baby’s bottom
- Before preparing food
- Before feeding children or eating yourself
Wash hands thoroughly with soap/ash and plenty of water. Wash also between the fingers and under your nails. Dry hands in the air or use a clean cloth.

**Clean your utensils**
- Clean surface (table, mat or cloth)
- Wash utensils immediately after use
- Keep clean utensils covered
- Use clean utensils, especially for young children. Open, smooth surfaced spoons are easier to clean
- Baby’s cup should be washed & scrubbed in hot soapy water, and dip the cup in boiling water before use if feasible

**Safe water and milk**
- Boil/treat water for drinking and baby’s feeds
- Boiling means water surface is bubbling vigorously
- Keep water in clean covered container. Ideally, a container where cups cannot be dipped
- Boil milk before use
- Milk and water can be boiled together

**Safe storage**
- Keep foods in tightly covered containers
- Store dry foods if possible (e.g. milk powder, sugar)
- Use milk within one day if not refrigerated
- Use prepared feeds within one hour
- Keep rubbish bins covered and remove the rubbish regularly
- Keep food preparation areas in good condition (repair wall cracks or holes)
- Use baits or insecticides to kill pests (taking care not to contaminate food)
- Keep domestic animals and insects away from food preparation areas
- Do not store baby’s milk in pottery (unless it has a lid); it allows evaporation of water from the surface

Module 3 will talk about food safety and food hygiene in more depth.
**Definition of under-nutrition**
Under-nutrition results from not eating enough to supply the body with all the required food nutrients. Affected individuals lose weight, become deficient of macro- and micronutrients and therefore frequently fall sick.

**Causes of under-nutrition**
- Lack of dietary diversity
- Eating foods low in nutrients
- Failure to feed children as recommended
- Poor household and environmental hygiene
- Failure to treat household members on time
- Failure to care and attend to all household members

**Forms of under-nutrition**
**Acute under-nutrition or thinness:** characterized by weight loss, wasting, and in very severe cases the swelling of both feet with fluids
**Underweight:** Individuals have low weight compared to the average weight of healthy individuals of the same age and sex
**Stunting:** Individuals have less height compared to the average height of healthy individuals of the same age and sex. It is **irreversible**
**Micronutrient deficiencies:** Individuals are deficient of vitamins and minerals. These deficiencies take long to be detected until signs are visible. By then, much damage has already been caused

**Impact of under-nutrition**
- Physical abnormalities/impairments
- Impaired brain development
- Frequent illnesses
- Death
- Faltered growth in children
- Increased costs associated with the treatment
- Poor family and community development
- Loss of labour productivity, income and family members

**Family and community prevention of under-nutrition**
**Prevention** should be the key as it is cheaper than treatment.
All household members should:
- Eat adequately with a focus on everyone eating a diverse diet
- Receive timely treatment for all diseases
- Maintain individual, family and community hygiene and sanitation

**Growth of children** should be monitored till they are 2 years of age and take vitamin supplements
**Children** should get their vaccinations in time
**HIV positive** parents should seek additional services

**Tips for optimal infant and young child feeding**
- Initiate breast feeding in the first hour of life
- Exclusively breast feed children up to 6 months of age and continue breast feeding until they are 2 alongside their other meals

**Maternal health**
- Eat more during pregnancy and breast feeding
- Eat plenty of fruits and vegetables
- Drink enough water (8 glasses)
- Avoid taking tea or coffee
- Take iron and folic acid tablets throughout pregnancy
- Take vitamin A capsule within 8 weeks of giving birth to help build the baby’s immune system through your breast milk
- Use iodized salt
- Take de-worming tablets to treat worms and to prevent anaemia
- Do not use substances like alcohol, narcotics or tobacco
- Sleep under an insecticide-treated mosquito net to prevent malaria
- Take anti-malarial drugs as prescribed by a health worker
Sanitation and hygiene to prevent diseases

Clean your hands
- After using the toilet
- After cleaning baby’s bottom
- Before preparing food
- Before feeding children or eating yourself

Wash hands thoroughly with soap/ash and plenty of water. Wash also between the fingers and under your nails. Dry hands in the air or use a clean cloth.

Clean your utensils and crockery (plates/bowls)
- Before and after feeding your baby and food preparation generally