



# Nutrition Action Group Program Manual



**Child Aid ZAMFAM South Central**





## Introduction

The Zambia Family South-Central Activity (ZAMFAM South Central) is a five-year project being implemented by Development Aid from People to People in Zambia (DAPP) with the sub-partners Creative, KAFHI and NZP+ and with funding and technical support from the American People through USAID/Zambia.

The overall goal of the project is to improve the care and resilience of vulnerable children in Southern and Central Provinces by supporting, protecting and strengthening the capacity of children, families and communities. The goal will be reached by directly involving the children, youth, families, caregivers, community groups and government structures. Activities for children and adolescents living with, affected by and/or vulnerable to HIV, are aligned to the following 4 results:

- Resilience of households to care for children and adolescents increased.
- Child wellbeing status improved due to provision and accessing of quality care and support services.
- Capacity of government and community structures to care for and support children and adolescents increased.
- Strengthen shared learning.

Activities will be implemented in close cooperation with Government Line Ministries and Institutions, Civil Society Organizations, Faith Based Organization and community structures such as Community Welfare Assistant Committees, Village Action Groups, Support Groups for People living with HIV and Youth Clubs.

ZAMFAM South Central will demonstrate the power of Zambians to create change for themselves.

This guide has been designed for the Nutrition Action Groups to carry out the 10 months program.

This booklet contains monthly headlines and content for each of the weekly meetings.

It has been designed to be easy to use for the Nutrition Action Groups, the Nutrition Action Group coordinators and the project staff who are assisting the clubs.

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# Nutrition Action Groups – The year at a glance

## MONTH 1

**The importance of eating from all the food groups**



### *Lessons & Actions*

Welcome to the Nutrition Action Group  
The food pyramid  
The micronutrients  
Basic knowledge about cooking

## MONTH 2

**Let us get rid of malnutrition**



### *Lessons & Actions*

A child who grows well is healthy  
Recognizing and preventing malnutrition  
How to eat better with little money  
The importance of vitamins and minerals

## MONTH 3

**Know your body**



### *Lessons & Actions*

Reproductive health for men and women  
Symptoms of early stage pregnancy  
The diseases of the reproductive organs  
Meals for pregnant women

## MONTH 4

**Staying healthy during pregnancy**



### *Lessons & Actions*

How to take good care of yourself  
Nutrition during pregnancy  
What happens during and after birth?  
Healthy meals and snacks for lactating women

## MONTH 5

**Healthy babies**



### *Lessons & Actions*

The first 1,000 days of a child's life  
Breastfeeding your baby until 2 years of ages  
When to start on complimentary food  
Complimentary food for children

## MONTH 6

**Healthy children**



### *Lessons & Actions*

The most common childhood diseases  
Signs of dehydration – clean water  
No to malaria – get rid of mosquitoes  
Re-hydration drinks for sick children

## MONTH 7

**Give our children the best start in life**



### *Lessons & Actions*

How children grow and develop  
What small children need to develop  
The importance of going to school  
The importance of proteins for growth

## MONTH 8

**Healthy family**



### *Lessons & Actions*

Family planning – a woman's choice  
The reality of violence against women  
Hygiene at home and when cooking  
The importance of colorful vegetables

## MONTH 9

**Garden Farming**



### *Lessons & Actions*

A healthy family is a resourceful family  
How to solve the 5 most common problems  
Actions to improve eating habits  
The benefits of moringa

## MONTH 10

**Preserving and storing food**



### *Lessons & Actions*

Why some foods are good and some are bad  
Storing vegetables  
We share methods for preserving  
How to make healthy oils and snacks





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# **Program Manual for Nutrition Action Groups**

## **Introduction**

Dear members of the Nutrition Action Group

Zambia has one million four hundred thousand orphaned children. This is a huge number in a total population of 15.8 million people.

Your own family, or your neighboring families are among those who are caring for a number of these orphans, and the Action Groups are formed for you to be able to help each other with the task.

The Program Manual for the Nutrition Action Group will assist you in getting more knowledge on how to get healthy food for your family and most of you will establish a garden farm and in this way be able to produce food for the orphans as well as for the whole family. Some of you might also be able to produce food for sale, and in this way earn some extra money for school fees and clothes.

While working through the Program Manual, you will learn about nutrition and how much impact healthy food can have on the entire life of a person, from the embryo in the mother's belly, to growth and learning of children, a productive adult life, and even better health during old age. How to recognize malnutrition and what to do about it. And how to use healthy food and cook delicious dishes.

The Action Group Program Manual covers the activities of the Action Group for 10 months. Each month has its headline and plans for four meetings, with three lessons, one cooking demonstration, and homework to do between the meetings. For each lesson and cooking demonstration, there is an introduction, and an instruction in how to go about the lesson.

## **The life and work of a Nutrition Action Group**

Each group is constituted by members from 10-20 families.

The group will choose two coordinators.

There will be a meeting every week for 3 to 4 hours, with a lesson and an action to try out something, make improvements at home and sometimes in the community. The forth lesson of every month includes a cooking

demonstration with a number of dishes to try out to get hands on experience in cooking in a healthy way, and using healthy food.

Each family will also make their own garden, a backyard garden or a garden close to the available water source, depending on what the best option is.

In the weekly meetings, the group will use the Nutrition Action Group Program Manual to get introduction to the weeks' topic, and the actions to take.

The two coordinators will prepare the monthly lessons with assistance from the Community Mobilizer or the Project leader.

Once a month, the Nutrition Action Group will have a visit from the project staff, - either the Community Mobilizer or the Project leader. He or she will give the lesson of the week, and assist the club coordinators on how to prepare the lessons and actions for the next 3 weeks.

As a member of a Nutrition Action Group, you will take part in:

- Creating better conditions for the orphaned children and your own children to grow up in, by making sure that they eat well, do not get sick, and are supported in their social, intellectual and emotional development.
- Making backyard gardens, or small garden farms to grow healthy foods.
- Making use of locally available healthy foods.
- Using new methods of cooking nutritious meals.
- Supporting each other in the clubs.
- Sharing the knowledge on how to make healthy food with your neighbors, and other people in your community.
- Taking actions with the other families and in the community to improve nutrition, teaching, health, hygiene and sanitation.

## Month 1

### The importance of eating from all the food groups

#### Week 1 – Welcome to the Nutrition Action Group

##### Lesson: Presentation of the program

This action group is formed with the aim of your families being able to take better care of the health of your orphan children, and the health of the whole family, especially pregnant and lactating women. The idea is that your group meets once a week to learn about nutrition and health.

But, you will not only learn about and discuss nutrition and health. Once a month, the lesson will be in the form of a cooking demonstration, where you will try to cook new dishes of healthy food.

Maybe you will also be inspired to make a backyard garden or a garden farm together with your family, to ensure that you have vegetables and fruits available. With a vegetable garden, a family can produce food without using a lot of money. You can also produce better food, because with homegrown food it is possible to use good farming methods, and avoid using chemicals and poisons, which are usually used to produce the food you can buy in the supermarkets, and even in the open markets.

You can expect to learn more about what it means when food is healthy, and to learn new methods of cooking food in a healthy way.



The orphan children are now staying with you because they have lost their parents. Although your family has decided to take good care of them, it can be very difficult securing enough of everything to raise an extra child.

This is why the Nutrition Action Group will work together in helping each other with the task. Every month each of you will plan to do

something that will improve the life of the orphan children, and you will stick together to carry out your plans.



You should also engage the whole family in learning and using what you learn in the Nutrition Action Group, including all the children, and especially the teenagers who will soon be responsible for a family of their own. Children have a lot of energy. They like to learn, and they like to do something that is important for the whole family.

### **More about the Cooking Demonstrations**

Every month you will try out 3 new recipes with helpful hints on how to get started, and you will learn to create tasty and healthy meals for yourselves, and your families. Remember that all meals should consist of proteins, vitamins, minerals, carbohydrates and healthy fats. Moringa is included in many of the dishes because it is very nutritious. You can also use moringa in the daily cooking of other dishes.

During the cooking demonstration, you will prepare the dishes from the 3 recipes given in the program manual. You will not make a full meal, but just a small portion to taste.

Before starting to cook, you should read the recipes together. Then, divide yourselves into 3 groups. During the demonstration, everyone will assist each other in making the fire, cutting and chopping vegetables etc.

The headman will help to find a place where your group can meet. There also needs to be a place where it is possible to establish 3 cooking fires.

Before the first demonstration, you have to decide how to get the tools and utensils you need for cooking: knives, spoons, pots, cooking stick and small bowls for cutting and washing vegetables. You could decide to bring the utensils from home, and make sure what items to bring before each lesson. Before the cooking lesson starts, you must also agree which foodstuff to bring from home.

## Instruction

1. Discuss the idea of the Nutrition Action Group and consider the extra work it will need. Agree to join the group and stick together, in order to make it succeed in knowing a lot about nutrition and producing healthy food.
2. Choose two group coordinators.
3. Agree on what day in the week to meet for the weekly lessons and cooking demonstrations.
4. Discuss the situation of each of the orphan children belonging to your group members, and decide what improvements you can make happen during the first month.

If the Trios around each child have not yet been formed, this should be the first step.

In the first meeting of every month, your group will follow up on the orphan children. Each member explains how it went with the planned improvements, and decides what will happen in the next month. You also note if the child is well, and if not, discuss what to do.

## Homework

Tell the rest of the family about the plans of the Nutrition Action Group, and mobilize them to support it. Tell the orphan child about the improvements you think should happen, and make sure the child wants to cooperate.



You can take help from the project to learn to build and use a firewood-saving stove, as this will help a lot in your daily work. For the cooking lessons, it will be good to have 3 firewood-saving stoves, so you can prepare the food in smaller groups. But if you only have one, you can make two traditional fireplaces.

## Month 1

### The importance of eating from all the food groups

#### Week 2 – The food pyramid

##### Lesson: Mapping the foods we and our families eat

#### Introduction

Eating well is vital for a healthy and active life. We know that we need to eat in order to have the strength to work. People who have a poor diet, and do not eat the correct amounts of energy-rich foods and nutrients, are often sick and malnourished. However, we do not all know exactly what it means to eat well, and how we can manage to do it, when we only have limited resources.

Diets and eating habits vary from place to place. Families in different areas eat different types of foods, cook in a variety of ways, and the type and amount of food available can differ considerably.

But no matter where you are living, the human body requires a healthy, balanced diet, which provides the correct amount of food energy and nutrients, needed during the day. It must consist of a variety of different foods from different food groups, so that it contains all the many nutrients, a person needs.

#### Instruction

- 1) The coordinator reads the introduction and the list of nutrients, and explains why they are needed.
- 2) Look at the food pyramid and compare it with the food you eat on a normal day. Discuss if you get some foods from all the different food groups.
- 3) What are you missing? How can you get hold of it, by using what you have in a better way? Maybe by exchanging food, growing vegetables or adding wild plants?

#### More knowledge

Let us get started by introducing the main types of food we need to eat something from every day to stay healthy.

Nutrients	Main use in the body
<b>Carbohydrates</b> Starches and sugars Dietary fiber	To provide the energy needed to keep the body breathing and alive, for movement and warmth, and for the growth and repair of tissues. Some starch and sugars change to body fat when eaten. Fiber makes feces soft and bulky, and absorbs harmful chemicals and so helps to keep the gut healthy.

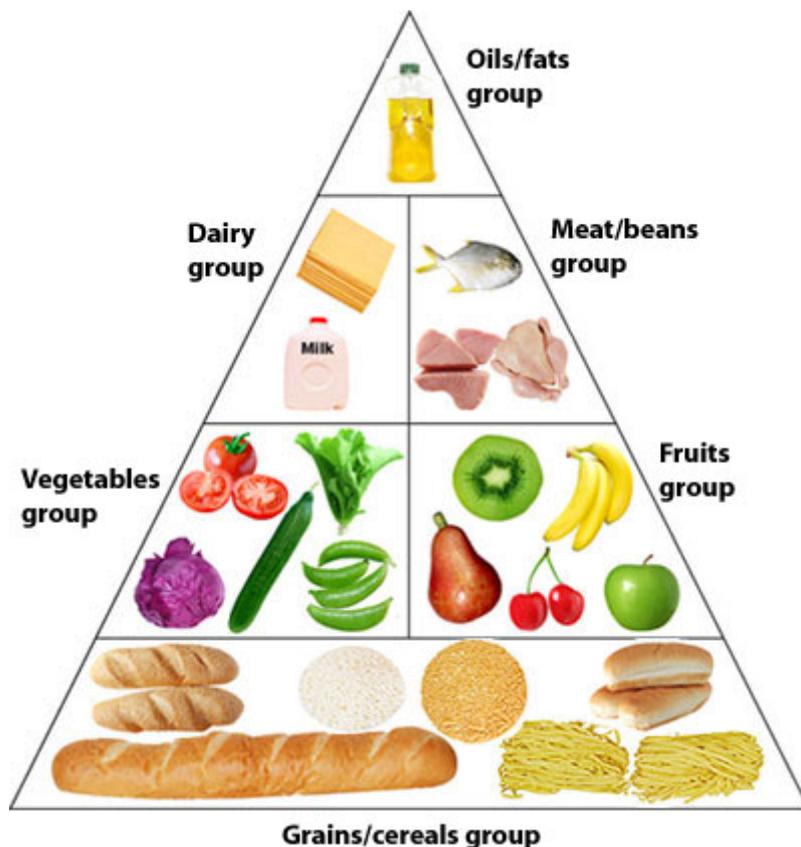
	It slows digestion and absorption of nutrients in meals, and helps to prevent obesity.
<b>Fats</b>	To provide a concentrated source of energy, and the fatty acids needed for growth and health. Fat aids the absorption of some vitamins, such as vitamin A.
<b>Proteins</b>	To build cells, body fluids, antibodies and other parts of the immune system. Sometimes proteins are used for energy.

The body also needs micronutrients such as Iron, Iodine, Zinc, Vitamin A, Vitamin B-groups, foliate and Vitamin C. You get the micronutrients from eating a variety of foods, especially fruits and vegetables.

Besides all the nutrients that you body needs, you also need a minimum of 2 liters of WATER every day.

The food pyramid shows the food groups you need to eat from every day, and the relationship between how much you need to eat, from each of the different types of foods.

*The food pyramid*



You will learn much more about the food groups during the coming months.

**Homework**

Tell your family about the food groups. Decide what should be changed, and engage your family in changing it. Try to add food from all the food groups every day.

## Month 1

### The importance of eating from all the food groups

#### Week 3 – The micronutrients

Lesson: What are micronutrients and which do you need to stay healthy during pregnancy, birth and breastfeeding?

##### Introduction

Micronutrients are vitamins and minerals. They are so called, because you only need them in small amounts, but you cannot be healthy without them. Some of them are especially important to have in the months when you are pregnant or breastfeeding.

The most important are iron, folic acid, calcium, iodine, and vitamin A. If you lack any of these, it can cause harm to you and your baby.



*Vitamins and minerals can be found in all vegetables and fruits - also in wild plants.*

##### Instruction

- 1) The coordinator reads the introduction and explains about the micronutrients.
- 2) Make smaller groups, and ask each other in which food you can find the micronutrients that are essential for pregnant women, lactating women and small children.
- 3) Discuss what should be changed in you and your families' diet NOW!
- 4) Share good ideas on how to find the food that is missing in your diets.

##### More knowledge

For the body organs to function well, it is necessary to get vitamins and minerals in your daily food. This also goes for men, children and elderly people.

Vitamins are organic substances (created by plants or animals). Minerals are inorganic elements that come from soil and water. They become part of our food when they are absorbed by plants or eaten by animals.

*The 5 most important micronutrients for a pregnant woman*

##### 1. Iron

Symptoms of lack of iron include weakness, fatigue, dizziness, and shortness of breath.

Iron is found in parsley, spinach, broccoli, green beans, tomato juice, clams, shrimp, and beef liver.



*Moringa leaves contain iron, calcium, vitamin A and C, protein and potassium*

## 2. Calcium

Everyone needs calcium to make bones and teeth strong. In addition, girls and women need extra calcium when growing up, when pregnant and when breast-feeding.

Calcium is found in milk, yogurt, cheese, broccoli, dark green leafy vegetables and sardines. Soybean foods such as soymilk are also good sources.

## 4. Iodine

Lack of iodine can cause swelling in the throat and other problems. If a woman does not get enough iodine during pregnancy, her child may be mentally slow. Iodine is found in foods from the sea, in meat, and in plant foods. Seaweed (like kelp), is the best source. Eggs and milk are also good.

## 5. Folic acid

Lack of folic acid can lead to weak blood and severe problems in newborn babies. So, getting enough folic acid is especially important before and during pregnancy.

Folic acid is found in dried beans and peas; dark green vegetables such as broccoli, spinach, collard or turnip greens, okra, citrus fruit and juice.

## 6. Vitamin A

Vitamin A prevents night blindness and helps fight off some infections. Many pregnant women have problems with night blindness, which probably means that their diet was lacking vitamin A before they got pregnant. Lack of vitamin A can also cause blindness in children. Vitamin A is found in milk, eggs, liver, dark orange or green colored vegetables (such as carrots, sweet potatoes, pumpkins, moringa leaves and cabbage) and in orange colored fruits, such as apricots, peaches, papayas, oranges and mangoes.



*Sweet potatoes contain vitamins A, B, C and potassium.*

## **Get help to stay healthy**

In many countries, the health system can provide nutritional help to women, young girls and children in the form of supplements:

Pregnant women: Vitamin A and iron tablets. Teenage girls: Iron tablets.

Children under 5: Vitamin A, zinc and iron tablets. Special treatment for severe malnutrition.

People suffering from HIV or TB are given supplements to help them to be able to tolerate the strong medicines: Vitamin A, C and E, zinc and selenium.

## **Homework**

Tell your family about the micronutrients and engage them in finding cheap solutions on how to get hold of the food you need to add to the family diet.

## Month 1

### The importance of eating from all the food groups

#### Week 4 – Cooking demonstration

Lesson: Basic knowledge about cooking

##### Introduction

The aim of today's cooking lesson is to point at ways to improve cleanliness while cooking, and to get ideas of how to cook in a manner that preserves as many nutrients as possible.

##### Instruction

- 1) The coordinator reads the points on cleanliness while cooking.
- 2) Discuss each point and ask questions of each other on how to do it.
- 3) Divide into 3 groups and prepare one recipe in each group.
- 4) Follow the instructions in the recipes.

##### More knowledge

Points to consider when you are preparing food:

- ✓ Wash your hands before cooking and before you eat.
- ✓ Wash or peel all fresh produce, and always wash vegetables before you cook.
- ✓ Make sure all the utensils and plates you are using are clean.
- ✓ Use bowls or plates to cut vegetables.
- ✓ Do not overcook vegetables, because if you do all the vitamins will disappear.
- ✓ Never leave cooking food unattended, not even for a minute.
- ✓ Store utensils in a clean place.
- ✓ Always throw away rubbish after cooking.
- ✓ Always keep the cooking place clean.
- ✓ Do not put food on unwashed plates, always use a clean plate.

Basic methods of cooking:

*Sauté* - Cook in a small amount of fat over a high heat, making the pan “jump” in and out.

*Grilling* - Cook over hot charcoals on an open fire by placing the food on a wire mesh.

This method can be used to grill steak, chicken, fish, sweet potatoes or potatoes.



*Baking* - Place a pot with a lid on top of hot charcoals and put charcoals on the lid as well. Monitor the heat. Use this method to bake bread.

**Boiling** - Add water to the food and cook over a fire. Do not overcook vegetables as this will destroy all the nutrients. Instead of throwing away boiled water from vegetables, re-use it in other foods such as soup or relish, as it contains many vitamins.

**Stewing** - Cook on a low heat, using a lot of liquid. Cook all the food together in the pot. Mix garlic, ginger, salt and different vegetables in a stew for a good taste.

**Simmering** – is a very important method. Here you prepare food at a soft boil rather than a rolling, bubble breaking boil. Many foods require simmering.

## Dishes to cook:

### A. Sorghum porridge – serves 4

#### **Ingredients**

1 cup of sorghum flour  
2 teaspoons sugar  
1 teaspoon powdered moringa  
½ cup milk

#### **Method**

Mix flour smoothly with half of the milk.  
Add more milk, bring to boil.  
Cook gently to make a smooth porridge.  
Add sugar and moringa.



### B. Cowpea mealy meal bread – serves 4

#### **Ingredients**

1 cup cow pea flour  
1 cup mealy meal  
1 cup wheat flour  
2 tablespoons sugar  
1 teaspoon yeast and salt  
1 tablespoon cooking oil  
1 cup of milk or water

#### **Method**

Sift flour and mealy meal.  
Add yeast, salt, moringa, sugar.  
Add milk and mix to thin dough.  
Grease the baking pot with little oil.  
Heat the pot a little; pour the dough into the pot.  
Put hot charcoals on the lid and under the pot.  
Keep on checking until the bread is brown.



### C. Mashed pumpkin with peanut butter - serves 4

#### **Ingredients**

1 medium pumpkin, peeled, seeded and cubed  
¾ cup cornmeal  
1 ½ cup of peanuts or 3 tablespoons peanut butter  
5 teaspoon salt

#### **Method**

Boil the pumpkin in salted water until soft.  
Mash into a porridge.  
Add the cornmeal, cook for 30 minutes, stirring from time to time.  
Add the peanuts or peanut butter, and salt.



## Homework

Cook the three recipes for your family and tell them about the cooking methods and the rules for cleanliness when cooking.



## Month 2

### Let us get rid of Malnutrition

#### Week 1 – A child who grows well is healthy

Lesson: Why do we need to monitor the growth of our children and how to do it

##### Introduction

A child who grows well is healthy. A healthy child grows steadily.

If he eats enough nutritious food, and has no serious illness, a small child gains weight each month. A child who gains weight slower than other children, stops gaining weight, or is losing weight, is not a healthy child.

He may not be eating sufficiently, he may have a serious illness, or both.

In this lesson, we will discuss how to check whether a child is healthy, and is getting enough nutritious food. By keeping a “monthly record” of the child’s growth, you can find out if the child is growing normally, and it can help you to take an early action if something is wrong.

##### Instruction

- 1) The coordinator reads the text aloud.
- 2) Discuss your experiences with the growth of small children.
- 3) The coordinator has prepared how to measure weight, height and arms, and demonstrates how to do it.
- 4) Decide what system you want to use to follow up on all your small children

##### More Knowledge

If possible, take your baby to the nearest health center monthly, or bi monthly, to be weighed and have a checkup. Or, help each other to make a homemade beam scale, as shown below.

In any case, make a page in a notebook for every infant or small child you have, and fill it out every month, until the child is 2 years old.

What to look for:

- \* Body weight.
- \* Height.
- \* Arm circumference (how to measure, see below).

If the child is not growing or seems to be unwell:

- \* Check up for any secondary infections such as tuberculosis, oral thrush, persistent diarrhea and pneumonia.
- \* Check if the child has energy and reacts normally.



- \* Check up on breastfeeding - and on the mothers' ability to feed the newborn baby in the right way, and with enough milk.
- \* Check if the mother is getting sufficient nutritious food with the prescribed amount of proteins, vitamins and minerals.

If the child is not thriving, and if any infections or other illnesses occur, treatment should take place immediately at the local clinic. If the child shows symptoms of being HIV infected, it should be immunized, and consideration should be taken to give the child periodic prophylactic vitamin A supplements.

### How to measure the arm circumference

Cut out a slip of strong paper or plastic, 25 cm long. Make a mark at 11 cm from the start, and another at 13 cm.

You can now use this to get a good estimate of whether a child is malnourished, by measuring how many centimeters there are around the upper arm - as shown in the photo.

You must measure where the arm is the thickest, and the child must be more than 6 months old.

A child with acute malnutrition will measure less than 11 cm, and should immediately be referred to a clinic for treatment to gain weight.

A child with a measure of less than 13 cm is also malnourished. In this case, you need to ensure, that the child is given enough food and healthy food.



### How to weight the child at home

Use a spring-balanced scale from a shop

Make your own beam scale



Two hooks about 5 cm apart  
The scale hangs from this hook  
One meter long beam

*Baby holder*

*Moveable weight  
about 1 kg*

### Homework

Get hold of a notebook and make a page for each child.

Help each other to measure weight, height and arms of all the children.

Take action if any child needs treatment.

Follow up on your plans for the orphan children, and set the goals for this month.

## Month 2

### Let us get rid of Malnutrition

#### Week 2 – Recognizing and preventing malnutrition

Lesson: How to recognize malnutrition and what to do about it

##### Introduction

According to UNICEF's statistics, half of the children under 5 years, who die, do so due to diseases related to malnutrition.

Often, malnutrition in children is caused by the mother being malnourished while she is pregnant, and while she is breastfeeding.

Another cause of malnutrition can be that the child is not breastfed continuously, preferable until he is 2 years old. Malnutrition can also occur if the supplementary foods a child needs, from 6 months, and up to 2 years, is not enough and does not supply the child's body with enough calories, vitamins and minerals to sustain the growth of the child's body and brain. In this lesson, we will discuss how to recognize malnutrition in a child.

##### Instruction

- 1) The coordinator reads the introduction and the text on malnutrition aloud.
- 2) Learn the symptoms of mild and severe malnutrition.
- 3) Identify any malnourished children in your Nutrition Action Group and in your village.
- 4) Make a proposal on how to help them.

##### More knowledge

**Mild malnutrition** is the most common form of malnutrition.

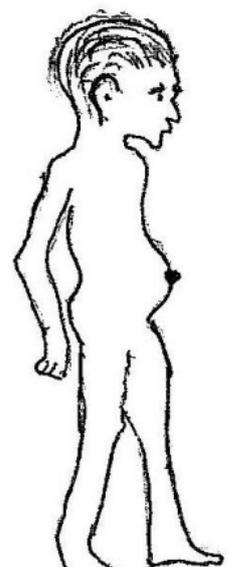
It is not always obvious to see and recognize.

The child simply does not grow, or gain weight as fast as a well-nourished child.

Although he may appear rather small and thin, he usually does not look sick. However, because he is poorly nourished, he may lack resistance to infections. He becomes seriously ill often, and it takes a longer time for him to get well, than it takes for a well-nourished child.

A common illness often turns into a serious illness which causes the child to die.

It is important that malnourished children get special care and enough food, *before* they become seriously ill.



**Mild Malnutrition**

This is why regular weighing, measuring height and measuring around the middle-upper- arm of young children are so important. It helps us to recognize mild malnutrition early, and correct it.

**Severe malnutrition** occurs mostly in babies who stop breastfeeding early, or suddenly, and who are not often enough given sufficient high-energy foods. It can start with diarrhea or another infection. You can usually recognize children who are severely malnourished, without taking any measurements.

There are two main types of severe malnutrition:

1. The child does not get enough food of any kind.

In other words, he is starved.

His body is small, very thin and wasted.

He is little more than skin and bones.

He may have thinning hair, a wrinkled face like

an old man, always be hungry and have a potbelly.

He is very underweight.

This child needs more food—especially energy foods.

2. The child's feet, hands, and face are swollen. This can happen if a child does not eat enough proteins. More often, it happens when he does not get enough energy foods. Then his body burns up whatever proteins he eats, for energy.

He may have a swollen "moon face", have stopped growing, have sores and peeling skin, swollen hands and feet, and color loss in hair and skin. He is miserable, has thin upper arms and wasted muscles - but he may have some fat.

This child needs extra food more often - a lot of foods rich in energy, and some foods rich in protein.



**Severe Malnutrition**



**Wet Malnutrition**

### **Preventing malnutrition**

For a child from 6 months to 2 years to be healthy we should:

- ◆ Keep feeding him breast milk as much as before.
- ◆ Feed him other nutritious foods as well, always starting with just a little.
- ◆ Feed him at least 5 times a day, and give him snacks between meals.
- ◆ Make sure the food is clean and freshly prepared.
- ◆ Filter, boil, or purify the water he drinks.
- ◆ Keep the child and his surroundings clean.
- ◆ When he gets sick, feed him very well and more often, and give him plenty of liquids to drink.

A malnourished child can have lifelong problems with health and learning.

### **Homework**

Share your knowledge with mothers with small children. Work together to get all children suffering from severe malnutrition to the clinic for treatment.

## Month 2

### Let us get rid of Malnutrition

#### Week 3 – How to eat better with little money

Lesson: Getting good at using cheap and locally available, healthy food

##### Introduction

There are many reasons for hunger and poor nutrition. One main reason is poverty due to a lack of well-paid work, or a lack of land to grow food. But, there are many things you can do to eat better at a low cost – and by eating well, gain strength to provide for your family and your children in a better way. When children are hungry, they cannot concentrate on learning. They get behind in school and they easily drop out, making it even more difficult for them to get knowledge and strength to get out of poverty.

In this lesson, we will discuss how to eat better by knowing more about what to eat to stay healthy.

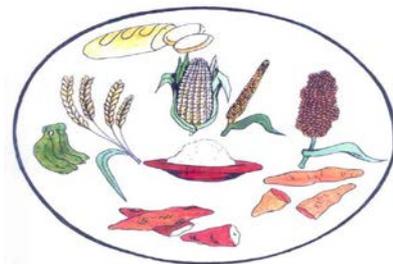
##### Instruction

- 1) The coordinator reads the introduction and you discuss your own situation in connection with getting better food.
- 2) The coordinator reads the text of “More Knowledge”, and for each of the 12 points you discuss how to make use of them. Also, add your own knowledge.
- 3) Discuss how you can work together to make use of any of the suggestions.

##### More knowledge

First of all, repeat the nutrients you usually do not include in the meals. You might think that nutrients from animals like meat, fish, milk and eggs are the most important. Alas, most people cannot afford much food from animals. Animals require more land for each kilogram of food they provide, than do vegetables and legumes. A poor family can be better nourished by growing, or buying plant foods like beans, peas, lentils, and groundnuts, and then eat this together with a main food such as maize, rice, potatoes or sorghum.

*Starch, sugar  
and fibres*



*groundnuts,  
food such as*



*Fruits and  
vegetables*

**People can be strong and healthy  
with most of their proteins and nutrients coming from plants.**

There are many ways to get healthy food with little money:

1. Breast milk is the cheapest, healthiest and most complete food for a baby. The mother can eat plenty of plant food, and turn it into the perfect baby food – breast milk. Breast milk protects the baby against diarrhea, and many infections. From birth until 6 months, only give breast milk.



To meet her energy needs, a child would need to eat this much boiled rice.

If the child's belly fills up before her energy needs are met, the child will become thin and weak.



But she needs only this much rice when some vegetable oil is mixed in.

2. Give a child above 6 months a spoon of vegetable oil in her meal.
3. Buy or grow beans, peas, lentils or other legumes in a backyard garden. They are good for everyone, and baby food can be made by cooking them well, and straining them through a sieve. Legumes are not only cheap proteins, but by growing legumes, you also make the soil richer so other plants will grow better.
4. Dark, green leafy vegetables have some iron, a lot of vitamin A, and some protein. The leaves of sweet potatoes, beans, peas, squash and baobab are especially nutritious.
5. Cassava (manioc) leaves contain 7 times as much protein and more vitamins than the root. If eaten together with the root, they add value at no additional cost. Young leaves are best.
6. Many wild fruits and berries are rich in vitamin C, as well as natural sugars. You need to know and avoid poisonous fruits.
7. Collect leaves from moringa trees, or plant a moringa tree at home. Moringa leaves contain iron, vitamin A and C, protein and potassium.
8. Buy or grow orange flesh sweet potatoes. They are called "Super Foods" because they contain lots of vitamin A and C and 11 other vitamins and minerals.
9. Cook in an iron pot, or put a piece of old iron in the pan when cooking. This will add iron to your food.
10. Give your children nuts, milk or egg instead of sweets, or cold drinks.
11. Liver, heart, kidney and blood are often cheaper to buy than other meat.
12. Consider keeping chickens to get meat and egg.

### Homework

Share your lesson with your family, and decide to do something to get better food for the same money – or even free of cost. Work together with people from your group on actions to improve the family meals.

## Month 2

### Let us get rid of Malnutrition

#### Week 4 – Cooking demonstration

##### Lesson: The importance of vitamins and minerals

##### **Introduction**

There are important vitamins and minerals that are needed, especially for women who are pregnant or breastfeeding. These are iron, calcium, iodine and vitamin A. Therefore, it is necessary to focus on the diet, so that the fetus can develop well, physically and mentally. A balanced diet is the best way to receive all the nutrients.



*Go for greens every day*

Vitamins and minerals are essential components that help the body to grow, and function well. Some minerals, like iodine, are only needed in small quantities, and others, such as calcium, are needed in larger amounts. Iron is needed to make the blood healthy and prevent anemia.

Each of the vitamins has a specific function. Vitamin A supports healthy eyesight, function of the immune system and development of healthy skin, bones and teeth. Vitamin C provides immune protection and healthy tissue development. Vitamin D and the mineral calcium are important for strong bones and teeth. Vitamin E helps your body to be able to absorb vitamin K, which helps in blood clotting and bone health.

Tomatoes are a good source of vitamins and minerals, in particular for obtaining vitamin K. Tomatoes can be red, yellow or orange, and can be eaten raw or cooked. A medium tomato can provide 5 to 10 percent of the daily requirement of these nutrients. Other good sources of vitamins and minerals are spinach, cabbage, sweet potatoes, leafy vegetables, milk and egg yolk.

A balanced diet is also important for the rest of the family. It helps the children to grow and the elderly to stay healthy. Elderly people are at risk of bone loss, and can be helped greatly by drinking a glass of milk and eating many green, leafy vegetables every day.

##### **Instruction**

- 1) The coordinator reads the introduction.
- 2) Read the recipes, and repeat which minerals and vitamins are found in the food used in them.
- 3) Divide into 3 groups and prepare one recipe in each group.
- 4) Follow the instructions in the recipes.

## More knowledge

Cooking food with many vitamins and minerals.

The idea of the first two dishes, is to use many types of vegetables to get the extra vitamins and minerals on top of the staple food, which can be rice, maize, sorghum or potatoes. In the last dish, sweet potatoes is in itself a staple food, rich in minerals and vitamins.

### Dishes to cook:

#### A. Sweet potato leaves with moringa – serves 4

##### **Ingredients**

2 cups of sweet potato leaves  
1 cup of moringa leaves  
1 cup of mushrooms  
1 tomato  
1 onion  
3 cloves garlic

##### **Method**

Clean the leaves of the sweet potatoes and cook until they are ready.  
Cook tomato, onion, garlic and salt in a separate pan.  
Add the leaves of the sweet potatoes, the moringa leaves and the mushrooms to the tomato sauce.  
Boil over low heat for 10 minutes.  
Serve with any staple food of your choice.



#### B. Spinach with tomato and onion – serves 4

##### **Ingredients**

4 cups chopped spinach  
1 tomato  
1 cup of mushrooms  
1 onion  
2 tablespoons oil  
Salt to taste

##### **Method**

Fry the onion and tomato in a pot. When onion and tomato are cooked, add the mushrooms and cook for 3 minutes.  
Add spinach and cook for another 5 minutes.  
When the spinach is ready, serve with rice, nshima or any staple food of your choice.



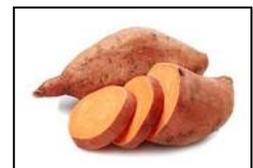
#### C. Orange sweet potato porridge with peanuts - serves 4

##### **Ingredients**

3 medium sweet potatoes  
Water (or milk)  
1 cup of roasted and peeled groundnuts

##### **Method**

Wash the potatoes and cook in a little water for a short time.  
When the potatoes are cooked, purée and add the powdered roasted groundnuts, mixing well.



### Homework

Cook the three recipes for your family and tell them about why it is important to eat food with vitamins and minerals.

## Month 3

### Know your body

#### Week 1 – The reproductive system

Lesson: Reproductive health for men and women, and common women issues

##### Introduction

Sometimes talking about the sexual parts of our bodies can be difficult, especially if you are shy, or do not know what the different parts of the body are called. In many places, the reproductive parts of the body are considered 'private'.

But knowing how your body works, means that you can take better care of it. You can recognize problems and their causes, and make better decisions about what to do about them. The more you know, the more you will be able to decide for yourself if the advice that others give you is helpful, or harmful.

In this lesson, you will get an overview of the reproductive systems, and how they function for men and women. You will discuss common problems, and how to deal with them. You may already have experienced many of these, and therefore be able to give each other good advice on how to treat them in the best way.

##### Instruction

- 1) The coordinator has prepared to introduce the lesson, and tell about the reproductive system. Maybe she has invited a nurse to participate.
- 2) Share your experiences with pregnancy and childbirth, paying special attention to helping young girls to understand the way the reproductive system functions.
- 3) Come up with "women issues" you have as a problem, or solutions you would like to share. Encourage each other to seek help with issues you do not know how to solve.
- 4) Follow up on your plans for the orphans, and make a new plan for this month.

##### More knowledge

The human reproductive system involves fertilization by sexual intercourse. During this process, the male inserts his erect penis into the female's vagina and ejaculates semen, which contains sperm. The sperm travel through the vagina and cervix, into the uterus to fertilize the female egg.

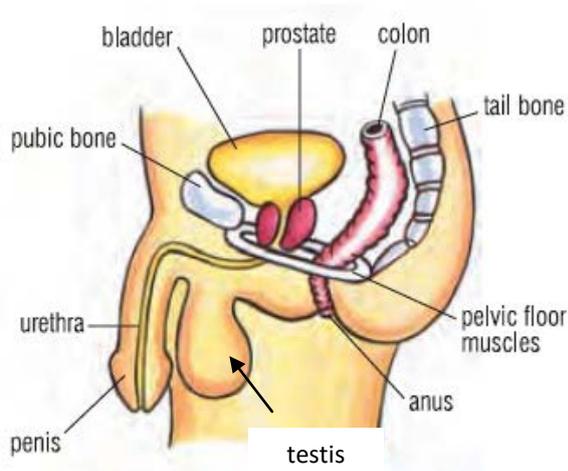
Upon successful fertilization, the development of the fetus occurs within the female's uterus. This process is known as pregnancy.

The female reproductive system has two functions: The first is to produce egg cells, and the second is to protect and nourish the growing child until birth.

The male reproductive system has only one function, and that is to produce and deposit sperm.

The reproductive systems are also important elements for the sexual satisfaction of both partners.

### The male reproductive system



Men produce sperm in their testes.

During sexual stimulation, sperm is mixed with fluids to become semen. Semen is ejaculated through the erect penis into the woman's vagina in order to fertilize an egg. 80 million sperm can be released during one sexual intercourse.

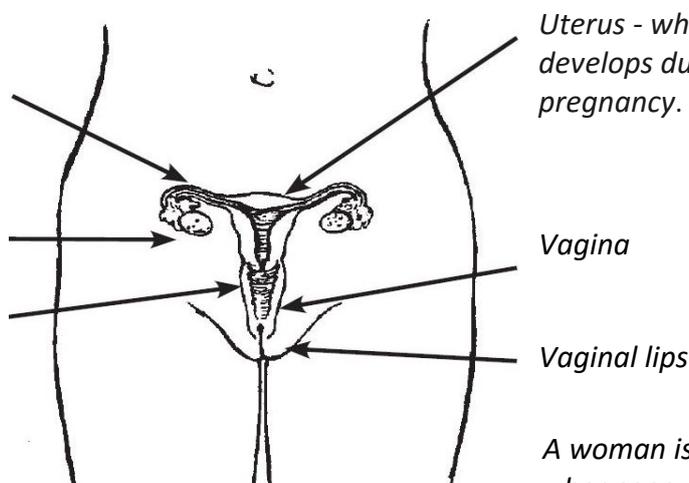
Men can easily get sexually transferred infections in the skin around the penis. This is why circumcision is often recommended. Circumcision means to remove the foreskin that covers the tip of the penis.

### The female reproductive system

*The ovary tubes – connect the ovaries to the uterus. When an ovary produces an egg, it reaches the uterus through the tube.*

*Ovary – where the eggs are produced. A woman*

*Cervix - the opening that connects the uterus to the vagina. Through it, the sperm enters the uterus. During labor, the cervix opens to let the baby out.*



*Uterus - where the baby develops during pregnancy.*

*Vagina*

*Vaginal lips*

*A woman is born with all her eggs and releases 1 egg per month.*

Menstruation is what all women have in common. Once a month during the fertile period, women have a few days where blood leaves the uterus through the vagina, and passes out of the body. This is called a "period" or menstruation. It is a healthy process and it is part of how the body prepares for pregnancy.

If you have problems with your period, or any other reproductive issues, talk to each other about it. You may find that others have the same problem.

### Homework

Share your knowledge with your family, especially your teenage children. Help each other. Go together to the clinic, if you need help.

## Month 3

### Know your body

#### Week 2 – Symptoms of early stage pregnancy

Lesson: How to know if you are pregnant, and what to do you if you are

##### Introduction

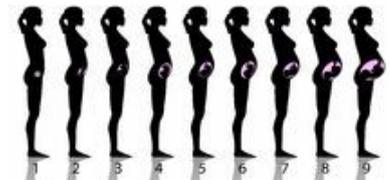
If you have experienced pregnancy already, you will probably know some of the first symptoms your body tells you, and will be sure that you are pregnant. If it is a first time pregnancy, it is good to know what to look for. Other women can tell you how their experiences were, but it can be very different from woman to woman. In this lesson, you will get to know about many different symptoms. To know your condition in the early stages gives you the possibility of starting to take extra care of yourself, because your responsibility for a new child's life has started. For you to be healthy and to eat nutritious food is now extremely important!

##### Instruction

- 1) The coordinator reads the introduction and you share your experiences.
- 2) The coordinator reads the text in “More Knowledge” point by point, and you discuss if any of you recognize the symptoms.
- 3) Share any other symptoms you have experienced.

##### More knowledge

When a woman becomes pregnant, her body begins a series of changes to connect the metabolism of the mother and the baby. Because of this, symptoms of pregnancy begin to appear.



\* *Early symptoms* - Usually, the first sign of pregnancy is the missed period. But other symptoms of pregnancy can start as soon as the production of the pregnancy hormone begin, which is sometimes even before the missed period.

\* *Feeling sick and vomiting* - Nausea and vomiting are typical symptoms of pregnancy. They usually worsen between the 8th and 16th weeks, but for some women it starts earlier.

\* *Emotional changes* - Sudden mood changes from joy to sadness, with no apparent reason, may occur.

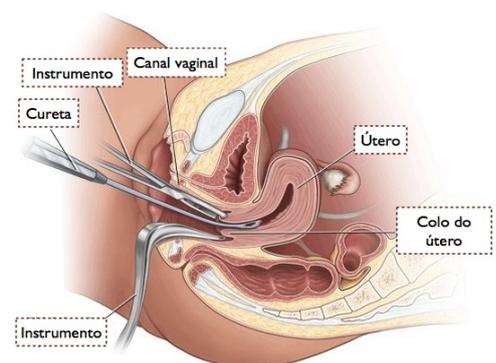
\* *Sleep disturbances* - A pregnant woman craves more sleep. In other words, she tends to go to sleep earlier, and has difficulty waking up in the morning, regardless of how many hours she has slept.

- \* *Abdominal pains* - Early pregnancy may cause some discomfort in the lower abdomen, and a feeling of swelling of the belly - like symptoms that come days before menstruation. With pregnancy, the uterus undergoes changes (including size), which stimulates some contractions which are felt as cramps.
- \* *Sensitive Mamas* -A pregnant woman can feel her breasts become swollen.
- \* *Breast enlargement and darkening of the areolas* - This can occur in the first or second week. It is caused by hormonal changes that prepare the mammary glands for breastfeeding.
- \* *Vaginal Bleeding* - A small amount of vaginal bleeding may occur 6 to 12 days after the egg is fertilized by sperm, the embryo travels through the fallopian tubes and implants itself in the uterus wall. This may cause a little bleeding (it is often thought to be the expected menstruation).
- \* *Intestinal disorders* - Often, there is an increase of gases during the first weeks of pregnancy.
- \* *Gastric acid* - The flow in the intestines slows down, thus constipation or gastric burning can occur.
- \* *Change in appetite* - During pregnancy there is great hormonal, emotional and metabolic disorder, which causes changes in appetite and food intake in women.
- \* *Changes in skin and hair* - Due to hormonal changes, changes may occur in the skin and hair, like reduced or increased oiliness.

If you think you are pregnant, take a pregnancy test as soon as possible to be sure, and start taking better care of yourself immediately.

## Medical Abortion

It is important for you to know about your pregnancy early, because if your health conditions make it dangerous for you to be pregnant, it could mean that you need to get an abortion at the hospital. Pregnancy can be terminated medically by the use of a combination of two drugs. It works by blocking fetal development, and in some cases requires surgical intervention to complete the process. After a medical abortion, a woman may have a more intense bleed than after a surgical abortion. This is similar to a menstrual bleed. The pains are also more frequent and can be followed by fever and diarrhea.



## Homework

Share your knowledge with young women in your family, and help them to be tested for pregnancy if they have the symptoms.

## Month 3

### Know your body

#### Week 3 – The diseases of the reproductive organs

##### Lesson: Why you need to be concerned about reproductive health

###### Introduction

Diseases of the reproductive organs are common and often easy to cure. Unfortunately, many women are too shy to contact a doctor and instead suffer in silence. This can cause severe damage to a woman's health and wellbeing.

Another consequence of not treating an infection is that eventually a baby may come to suffer from the same disease, and have set backs in development.

This is also a reason why a woman who is suffering from a sexually transmitted disease, should have herself examined at a health center as early as possible. It can often be a question of life or death for the child; for a mother a sexual disease can also be life threatening; in some cases cancer can develop.

Let us use this lesson to discuss more about sexually transmitted diseases, and their consequences for women and developing babies.

###### Instruction

- 1) The coordinator reads the introduction, and asks you to share what you know about infections in the reproductive system.
- 2) She reads the texts on STDs aloud, and if possible, the nurse has come to participate in the discussion.
- 3) Conclude together how you can make use of what you have learned today.

###### More knowledge

Sexually Transmitted Diseases, or STDs, are caused by microbes (virus, bacteria, amoebas or fungi) that survive on the skin or in moist places of the body. An STD often causes a bruise, or wound in the skin, and this acts like "an open door" for more serious infections such as HIV and AIDS.

Some STIs are curable, others are not. The best known are curable gonorrhea and syphilis. Among the non-curable, we have HIV and AIDS, but also herpes and warts.

**Gonorrhea** is a disease caused by the bacterium gonorrhea, affecting mainly the urethra, both in men and women. It is transmitted during sexual intercourse. The probability of attracting gonorrhea after having sex with an



infected person is as high as 90%. Babies are at risk of being infected by their mothers at birth, which can cause eye damage.

### *Symptoms and treatment of Gonorrhea*

Symptoms appear approximately ten days after contact. An infected person feels pain in the lower abdomen, bleeding and painful urination, because the urine is accompanied by pus. In men, it causes inflammation. Gonorrhea is treated with antibiotics, usually in a single dose.

**Syphilis** is an infectious and contagious disease caused by bacteria. It is transmitted mainly through sexual contact with an infected partner. It can also be transmitted from mother to fetus.

### *Symptoms and the treatment of Syphilis*

Syphilis starts with sores where the bacteria have entered the body. In men, a sore often appears in the genital area, usually on the penis. In women, sores can develop on the outer genitals, or on the inner part of the vagina. A sore may go unnoticed if it occurs inside the vagina or at the opening to the uterus.

The sores are usually painless and are not easily seen. Swelling of the lymph nodes may occur near the area of the sores. The sores usually last for 3 to 6 weeks, heal without treatment, and may leave a thin scar. After some weeks a rash appears. Even though the sores have healed, syphilis is still present, and a person can still pass the infection on to others. Syphilis can remain hidden in the body for years, suddenly re-appear, and cause severe illness that looks like other diseases, but can be fatal.

Syphilis can be detected by a blood test, and be treated with penicillin.

**HIV and AIDS** is a disease that attacks the immune system by destroying white blood cells. AIDS is considered one of the biggest problems of our time, for its pandemic character (attacks many people in the same region) and its severity.

### *Symptoms and treatment*

When the immune system is low, a person is often attacked by many other diseases such as TB, malaria, cough, fever, diarrhea, etc. Medicines for AIDS are called antiretroviral drugs. They prevent the multiplication of HIV, improve the immune system of the individual, and therefore, reduce the risk of developing other diseases. In this way, it can improve the quality of life of an infected person, especially if it is used together with a balanced diet, vitamin and mineral supplements, and physical exercise.

### **Homework**

Consider if you need to see a doctor for treatment of an STD, and make an effort to help other women in need, to be bold enough to do the same.





- 3) Divide into 3 groups and prepare one recipe in each group.
- 4) Follow the instructions in the recipe

### **More knowledge – how to cook**

#### A. Pumpkin leaves in groundnut powder – serves 4

##### **Ingredients**

2-3 cups of pumpkin leaves  
 1 tomato  
 1 tablespoon moringa powder  
 ½ cup groundnut powder  
 1 cup water  
 Salt to taste

##### **Method**

Boil water with a little salt.  
 Add pumpkin leaves and cook until done.  
 Cook onion and tomato in a separate pot and add groundnut flour and moringa powder.  
 When the sauce is done add it to the pumpkin leaves.  
 Mix and simmer for 5-7 minutes.  
 Serve with rice or nshima, or any other staple food of your choice.



#### B. Tomato, moringa and onion salad – serves 4

##### **Ingredients**

3 tomatoes  
 1 onion  
 1 cup Moringa leaves  
 ½ spoon vegetable oil  
 Salt and pepper

##### **Method**

Cut tomatoes and onion in rings.  
 Place them in a bowl and add moringa.  
 Mix the oil with salt and pepper.  
 Pour the oil over the salad and mix again.



#### C. Brown beans, cabbage and moringa soup - serves 4

##### **Ingredients**

1 cup brown beans  
 1 cup mushrooms  
 1 cup cabbage  
 2 medium tomatoes  
 1 onion  
 2 cloves garlic  
 2 cups moringa leaves

##### **Method**

Fry onion and add tomatoes, garlic and salt.  
 Add water and let it boil.  
 When the tomatoes are cooked, add mushrooms, green leafy vegetables and moringa leaves.  
 Boil for 5 minutes and remove from the fire.  
 The soup is ready, serve hot.



### **Homework**

Cook the three recipes for your family. Tell them about macronutrients and micronutrients, and where to find them. Share your recipes with friends and neighbors. Teach your children how to cook.

## Month 4

### Staying healthy during pregnancy

#### Week 1 – How to take good care of yourself during pregnancy

Lesson: What to do to be strong enough to give birth and care for a baby

##### Introduction

If you eat well during pregnancy, you are likely to produce a healthy baby. The foods you eat should be plentiful, rich in proteins, with vegetables and fruits.

It is important not to get sick, but to stay healthy during your entire pregnancy. It is best to go for health check-ups at the local health clinic every month, or go as often as it is possible for you.

Get tested for HIV as soon as you discover you are pregnant. Do it as soon as you can. Do not hesitate and do not wait. If you are infected with HIV, you will need to take medicine as soon as possible to strengthen your body, and lessen the change of spreading HIV to your baby.

In this lesson, you will learn what you can do to take good care of yourself during pregnancy.

##### Instruction

- 1) Start the lesson by telling each other what you think is the most important things to do to stay healthy.
- 2) Then the Community Mobilizer or the Project leader gives the lesson.
- 3) Discuss the points, and come up with more based on your own experiences.
- 4) Follow up on your plans for the orphans and make a new plan for this month.

##### More knowledge

Some good advice on "How to take good care of yourself during pregnancy"

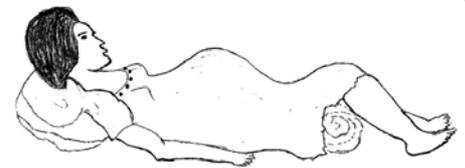
- ◆ Most of all, it is important to eat enough to gain weight regularly, especially if you are thin. It is also important to eat well. Your body needs foods rich in proteins, vitamins, and minerals - especially iron.
- ◆ Use iodized salt to increase the chances that your child will be born alive, and will not have learning difficulties. (Do not use too much salt as it can cause swelling of the feet, and other problems.)
- ◆ Try to rest more, but also get some exercise. You can continue your daily work, but take more breaks in between.
- ◆ Keep clean. Bathe or wash regularly, and brush your teeth every day.
- ◆ It is best if you can go for monthly check-ups at the local clinic.



*Do your daily work!*

If you cannot go every month, at least make sure to go at the beginning of the pregnancy and in the last months closer to the birth.

- ◆ Get tested for HIV when you discover you are pregnant. Medicines that fight HIV can prevent the spread of HIV to the baby.
- ◆ Avoid taking medicines. Some medicines can harm your baby. As a rule, only take medicines recommended by a health worker, or doctor who knows that you are pregnant. You can take acetaminophen, or antacids, once in a while, if you need them.



*And take a rest when you need it!*

Vitamin and iron pills are not medicines, but supplements. They are often helpful, and are not harmful when taken in the right dosage.

- ◆ Do not smoke or drink alcohol during pregnancy. Smoking and drinking alcohol are bad for the mother and harm the developing baby.
- ◆ Stay far away from children with measles, especially German measles.

Minor problems during pregnancy:

- ◆ Nausea or vomiting: This is worse in the morning, during the second or third month of pregnancy. Eat something dry, like crackers or dry bread, before you go to bed, and before you get out of bed in the morning. Eat smaller meals several times a day. Avoid greasy foods. Tea made from mint leaves also helps. In severe cases, take an antihistamine (medicine) when you go to bed and when you get up in the morning.
- ◆ Burning or pain in the pit of the stomach or chest (acid indigestion and heartburn): - Eat only small amounts of food at a time, and drink water often. It may also help to suck hard candy. Try to sleep with the chest and head lifted up a little by pillows or blankets. Antacids (medicine) can help, especially those with calcium carbonate.
- ◆ Swelling of the feet: Rest with your feet up at different times during the day. Eat less salt and avoid salty foods. Teas made from maize silk (corn silk) may help. If the hands and face also swell, seek medical advice.
- ◆ Low back pain: This is common in pregnancy. It can help to do exercise, and taking care to stand, and sit with the back straight.
- ◆ Constipation: Drink plenty of water. Eat fruits and food with a lot of fiber, like cassava. A cup of coffee can also help. Do not take strong laxatives.

### **Homework**

By sharing your own experiences, and what you have learned and discussed during this lesson, with young pregnant women, you can really help them to stay healthy throughout their pregnancy. Build up a good relationship with the local nurse, and accompany pregnant woman for the first check up at the clinic.

## Month 4

### Staying healthy during pregnancy

#### Week 2 – Nutrition during pregnancy

##### Lesson: Why you need to eat well and what to eat

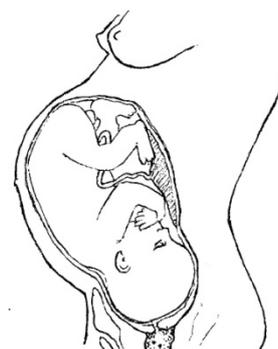
##### **Introduction**

Staying healthy during pregnancy and eating for good health, is a good motto for any pregnant women.

From the beginning of a pregnancy and until the child has reached the end of its second year, the woman's body is nourishing not only herself but also her child. First, she is nine month pregnant: the child is developing in the womb, from embryo to fetus, to becoming a full born child. After delivery, her body produces breast milk, and she starts breastfeeding the child. Breastfeeding is meant to continue for the next 2 years.

While the fetus is growing in the womb, the woman's body delivers food and nutrition to the fetus via her blood that runs through the placenta. You can say that the woman carries two bodies in one.

The fetus' survival and development is dependent on the mother's strength and nutritional condition. The nutrition the pregnant mother receives is as important for her, as it is for her child. She needs to be able to stay strong and healthy during pregnancy, and while lactating. The fetus needs to develop properly in the womb. The child needs to survive and become a strong child, and a healthy fully developed adult later on in life.



*The fetus also needs healthy food*

##### **Instruction**

- 1) The Coordinator has prepared the lesson.
- 2) Discuss in the group what a pregnant woman can do to eat healthy.
- 3) Discuss if there are any local misconceptions about what women should, or should not eat during pregnancy, and what to do to get around them.

##### **More knowledge**

Living in a poor family is the hardest on women. This is because in many families, no matter how little there is to eat, the women and girls get less food than the men and boys.

Still, there are many things you can do to eat better without using extra money. By knowing what type of food is needed to eat well, and how to get it, you can get stronger and feed your families better.

## **What should you eat during and after your pregnancy?**

Good nutrition for a pregnant and breastfeeding woman means eating enough foods, and the right kind of foods, for her body to stay healthy and strong, and for the fetus to grow and develop optimally.

The staple foods such as maize, rice, wheat or potatoes are not enough to keep her strong and healthy. Other nutritious foods are needed:

Protein (which helps to maintain her body, and build the body of the child)

Vitamins and minerals (which helps to protect and repair the body)

Fats and sugar (which gives energy)

A healthy diet includes foods with proteins, as well as fruits and vegetables rich in vitamins and minerals. You need only a small amount of fat and sugar.

But if you have problems getting enough food, it is better to eat foods with sugar and fat, than to eat too little food. You do not need to eat all the foods listed here to be healthy. You can eat the staple foods you are accustomed to, and add as many sorts of other nutritious foods, as are available in your area.

### **Here is a list of other healthy foods divided into groups:**

- Fish, eggs, meat, beans, nuts and milk, are protein-rich products.
- Vegetables of all kinds are all rich in vitamins and minerals.
- Fruits of all kinds are rich in vitamins and minerals.
- You need a small amount of fat.
- You need a small amount of sugar. Not white or brown sugar, but the sugar you can get from vegetables and fruits.

There are 5 important vitamins and minerals that women need, especially if they are pregnant or breastfeeding. The 5 are: iron, folic acid, calcium, iodine and vitamin A.

You have already learned about these vitamins and minerals in earlier lessons, and you know from which fruits and vegetables you can obtain them. Maybe you can also get them from a local clinic as part of a national program.

*Families may be able to produce more food*

### **Be aware about some harmful ideas on eating**

In many parts of the world, certain traditions and beliefs about women and food are more harmful than helpful. For example: Women and girls need less food than men and boys; women should avoid certain foods during pregnancy; a woman should always feed her family before she eats; and many more.

### **Homework**

Share your knowledge with pregnant women in your village, and help them to find ways to eat healthy. Go against ideas about pregnancy that can harm women.

## Month 4

### Staying healthy during pregnancy

#### Week 3 – What happens during and after birth?

Lesson: The changes in your body, and why you need to be strong

##### Introduction

Every pregnant woman needs good health, good food, and the love and support of her family and community. Most women who are healthy during pregnancy do not have difficult births. At the same time, pregnancy can be one of the main dangers a woman faces in her life, and some women may die from problems during pregnancy and birth. The majority of women in today's world does not get prenatal care or trained help during birth. They usually have their babies at home with the help of a local midwife, or a family member.



Going through the 9 months of pregnancy and childbirth is quite an ordeal for a woman's body, and mind.

*Take good care of the mother*

That is why the women's body has to stay strong and healthy during pregnancy, to be ready to give birth, to recover after the baby is born, and to produce enough milk to breastfeed the baby. She also needs to be strong and healthy to be able to breastfeed the child for the first two years.

##### Instruction

- 1) The coordinator has prepared the lesson and reads the text.
- 2) Share your own experiences of giving birth.
- 3) Answer questions from young girls and first time pregnant women.

##### More knowledge

Your body prepares for childbirth throughout your pregnancy, but in the last few weeks, it does some final preparations:

- Hormones start working to soften the ligaments between the bones in your pelvis, which gives your pelvis additional room for the birth. During this time, you might feel a shift in your sense of balance, your joints might feel looser, and you might feel sore and achy.

- Other hormones begin to soften the neck of the uterus. Throughout most of the pregnancy this is closed, holding the baby inside your uterus.

Much of the work of labor is caused by opening the cervix for the baby to pass.



*The bones of the pelvis start to open*

- Your baby begins moving down. You will notice this by feeling increasing pressure in your lower abdomen, and you will feel that breathing becomes easier. You look different, because your baby has "dropped." For first time mothers, this may take place up to a few weeks before the birth. For women who have already given birth, it may not occur until after labor begins.

- You may experience the passage of stringy, perhaps blood-tinged mucous. Some women may experience this for a few days, or even weeks, before labor begins, others may not notice it at all.

- The breaking of the bag of water may also occur before labor begins. For most women, contractions will follow within a day. (You should notify your midwife or doctor, when you think your water has broken.)



*Normal position of the baby in the womb at 9 months*

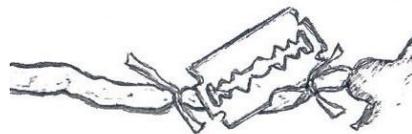
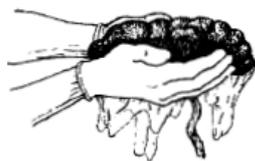
**Giving birth** - There are three stages of giving birth (labor):

*1st stage:* You have contractions to open your cervix. This stage can last between 7 to 20 hours if it is the first birth, and in later births 7 to 10 hours.

*2nd stage:* Pushing. This is the active labor. You have contractions that bring your baby down into the vagina and out into the world. You assist this process by pushing. It often lasts 2 hours.

*3<sup>rd</sup> stage:* Placenta. You continue to have contractions to free the placenta, and you push the placenta out. The placenta is delivered within a few minutes after the child, but delays of up to thirty minutes are normal. If the separation is delayed, breastfeeding the baby, or stimulating your nipples may help. When the placenta has been delivered, it is important to examine it thoroughly. If it is not "whole", some part of it might be left inside the womb, which can cause severe bleeding.

*The placenta has to be "whole"*



*Cut the cord with a new razor blade*

**Straight after birth - meeting your baby** - As soon as your baby is born, it needs to be close to you. It is a good idea to place the baby close to you, even before the cord is cut, so that she can feel skin contact and closeness straight away. The cord is clamped and cut, and the baby is dried to prevent her from getting cold. Mucus sometimes has to be cleared out of a baby's nose and mouth. Some babies need additional help to establish breathing. After birth, for at least 6 weeks, the mother needs a lot of rest

### **Homework**

Share your knowledge with first time pregnant women, and your daughters.

## Month 4

### Staying healthy during pregnancy

#### Week 4 – Cooking demonstration

Lesson: Healthy meals and snacks for lactating women

##### Introduction

The arrival of a baby brings joy, and the challenges of breastfeeding starts. It is important that you continue to eat a balanced diet. It is very important that a lactating woman eats foods rich in nutrients, and eats enough food. Fruits and vegetables play an important role in a nursing mother's diet. They have vitamins and minerals, and especially fiber, vitamin C and vitamin A. You should eat at least  $\frac{1}{2}$  a cup of green leaves every day, and 1 piece of fruit of the season.



Some good sources of Vitamin A are sweet potatoes, pumpkins, spinach and mangoes. Calcium- rich foods are essential for a breastfeeding diet. Calcium helps to build and protect bones and teeth. Calcium also plays an important role in blood clotting, and helps to maintain a healthy blood pressure. Drink at least 1 cup of milk, if possible, or eat green leafy vegetables every day such as cassava leaves, covo or pumpkin leaves.

Proteins are essential in building and maintaining a healthy body. This is important for pregnant and lactating women. Proteins support growth and repairs tissues. Include protein rich foods in your meals such as fish, beans, eggs, chickens, nuts or seeds from e.g. pumpkins or sunflowers.

A small amount of oil is also an important part of your diet. Dietary fat supports normal growth and development. Healthy oils are found in pumpkin seeds, sunflower seeds, and peanut oil.

Many breastfeeding mothers feel very hungry, because their body is working around the clock to make milk for the baby. Eating small meals with healthy snacks in between is a good way to keep hunger away. You can take snacks like roasted groundnuts, roasted pumpkin seeds, and roasted sunflower seeds, or even add a little bit of salt when roasting. A sudden large drop of calories can affect the milk supply, so do not go on a diet to lose weight.

##### Instruction

- 1) The coordinator reads the text for the lesson.
- 2) Repeat the nutrients that are important for lactating women, and where to find them.

3) Divide into 3 groups, and follow the instructions on how to cook the dishes.

### **More knowledge – how to cook**

#### **A. Toasted peanuts – serves 4**

##### **Ingredients**

1 cup of peanuts in shells  
4 table spoons water  
Salt

##### **Method**

Roast the peanuts in a pan.  
Add salt and water.  
Roast until dry. Serve as a snack.



#### **B. Soybean delight – serves 4**

##### **Ingredients**

1 cup fresh soy flour  
2 tablespoons moringa powder  
3 tomatoes and 1 onion  
1 bunch of green leaves (covo  
or any green vegetable)  
1½ cup of water

##### **Method**

Cut and clean the leaves.  
Cook in a small amount of water.  
Cut the tomatoes and the onion,  
add to the pot and cook until ready.  
Place the soybeans and a cup of water in a  
separate pot, and boil for 10 minutes.  
Mix the cabbage and soy sauce well, and add the  
moringa.



#### **C. Pumpkin in peanut butter – serves 4**

##### **Ingredients**

4 cups pumpkin peeled and cut  
4 tablespoons groundnut  
powder  
2 cups of millie meal  
Salt to taste  
Water



##### **Method**

Boil pumpkin until tender, then drain the water  
and keep it.  
Smash the pumpkin.  
Add millie meal in small quantities and mix  
until it forms a thick paste.  
Add the drained water from the pumpkin and  
cook for 5 to 10 minutes over low heat.  
Add the peanut flour to the pumpkin, mix well.  
Cook on low heat for 7 minutes.

### **Homework**

Cook the four recipes for your family and share them with a new mother.

## Month 5

### Healthy babies

#### Week 1 – The first 1,000 days of a child's life

Lesson: How the first 1,000 days influences the entire life of a child

##### Introduction

A lot of a child's possibilities in life are determined by what happens to the child during its first 1,000 days, from the time the baby is conceived, and until he turns 2 years old: 270 days in the mother's womb and 730 days as a baby and a toddler.

The child needs to get enough food and healthy food, but also:  
to feel the love of his parents and the people around him;  
to be involved in life around him;  
to learn from his own experiences, and from his siblings and parents.



- A small child who has had enough healthy food, and a positive experience of being loved and being included, will grow up healthy.
- Will be confident and be able to learn many new things.
- Will be able to learn in school, and build good relationship with other children and grown-ups.

Children, who have been malnourished during the first part of their life, will not develop as fast as children who have been well nourished, and will get sick easier than other children. Children, who have been left to themselves without anybody to communicate with, will lack in development of language and many social connections, whereas children who have been talked to and played with will develop social skills.

We are the adults and we have the responsibility to give every child the best possible start in life. It is possible to do. It is WHAT we do, that makes the difference.

In today's Course, you will learn more about the ways and means to give your child the support to develop the best he can, during his first two years.



##### Instruction

- 1) The Community Mobilizer or the Project leader reads the lesson aloud.
- 2) Repeat what pregnant women and babies need to eat to be healthy.
- 3) Discuss the points on how babies develop emotionally and socially.
- 4) Come up with ideas for playthings you can make from available material.
- 5) Follow up on your plans for the orphans, and make a new plan for this month.

## More knowledge

The fastest development in a child's life takes place in the 1,000 days between the start of a woman's pregnancy, and her child's 2<sup>nd</sup> birthday. This period offers a unique opportunity to shape a healthier and more prosperous future for the child.

## The right nutrition

The right nutrition during these 1,000 days can have a profound impact on your child's ability to grow, learn and rise out of poverty.

Malnutrition is still a leading cause of deaths among young children throughout the world. For infants and children under the age of two, the consequences of malnutrition are particularly severe, often not repairable, and have far-reaching consequences into the children's futures as adults.

By focusing on improving nutrition for mothers and children in the first 1,000 days, we can help ensure that a child can live a healthy and productive life.

Besides nutrition of the mother, her exposure to violence and fear also plays an important role in the health of the child, as her feelings will be transferred to the child.

## A healthy learning environment

- Ensure health, safety, and good nutrition.
- Develop a warm, caring relationship with children: Show them that you care deeply about them. Express joy in who they are. Help them to feel safe.
- Respond to children's cues and clues: Notice their rhythms and moods, even in the first days and weeks of life.
- Respond to children when they are upset, as well as when they are happy. Try to understand what children are feeling, what they are trying to tell you.
- Touch and play with them. It is not a question of buying expensive toys; homemade toys can be very effective.
- Surround them with language. Talk to them, sing to them, play music, tell stories and read books. Answer the toddlers' questions.
- Recognize that each child is unique: Keep in mind that from birth children have different temperaments, and that they grow at their own pace.
- Establish routines: Create routines and rituals for special times during the day like mealtime, naptime, and bedtime. Try to be predictable so the children know that they can count on you.



## Homework

Share the lesson with your family. Discuss how your children are developing, and what you can do to help them just by knowing how children develop.

# Early Learning and Development Ideas for Parents and Caregivers



Your child is going through a journey of development that started at conception. This guide provides you with ideas on how to support your child's development. Remember, your child is unique and will follow her or his own journey, perhaps a bit slower or faster than other children of the same age.

## Birth to 3 months



- Always handle the baby gently, even when you are tired or upset.
- Support the baby's head when you hold the baby upright.



- Lay the baby on a clean, flat, safe surface so she or he can move freely and reach for objects.
- Continue to exclusively breastfeed on demand day and night.



- Visit the health worker with the baby six weeks after birth.

## 4 – 6 months



- Children respond to their own name and to familiar faces.



- Prop or hold the baby in a position so she or he can see what is happening nearby.



- Spoken, visual and physical cues must be provided to help children to learn and grow.

- Children begin to imitate sounds and facial expressions.

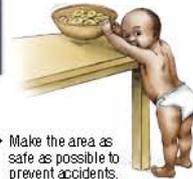
## 6 – 12 months



- Make sure that the child is fully immunised and receives all recommended doses of micronutrient supplements.



- Point to objects and name them, talk and play with the child frequently.



- Talk, read and sing to the child as often as possible.



- Make the area as safe as possible to prevent accidents.

## 1 – 2 years



- Children should be allowed to choose and direct their activities according to their individual ages, needs and interests.



- A child's own language should be used whenever possible and especially when sharing important information.

- Children should always be encouraged and motivated and should never be belittled.
- Discipline must be positive, consistent and age-appropriate.

## 3 – 4 years



- Young children should have different kinds of materials and toys to play with inside the house as well as outside.



- The house on the inside as well as the outside area must be safe for the young child to play freely.



- Help the child learn to dress, wash her or his hands and use the toilet.



- Children need healthy food and safe sanitation.
- Children must receive regular and routine medical and dental check ups and immunisations.



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Prepared by and obtainable free of charge from:  
Directorate: Early Childhood Development, Department of Education,  
Private Bag X895, Pretoria, 0001  
Telephone: 012-3125435 • Email: [Samuels.M@doe.gov.za](mailto:Samuels.M@doe.gov.za) • [www.doe.gov.za](http://www.doe.gov.za)

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## Month 5

### Healthy babies

#### Week 2 – Breastfeeding your baby until two years of age

Lesson: Why it is best for the baby and why stopping can put the baby at risk

##### Introduction

The milk a woman produces to feed her child contains all the nutrients the child needs, the milk comes directly from the breast of the mother to the mouth of the child, and it is always the right temperature. Therefore, it is the safest way to feed a child.

Breast milk is like a “super food” that contains the most micronutrients in one single type of food.

Breastfeeding has many other advantages: it helps the womb to stop bleeding after birth; the mother’s protection against illness is passed on to the baby through her milk, and in this way the baby is also protected against illness and infections; for some women, giving their babies nothing but breast milk can help protect them from becoming pregnant again too soon.

And remember, breastfeeding is free.



##### Instruction

- 1) The coordinator presents the lesson.
- 2) You raise all the questions you have on breastfeeding, and how to feed your child until the age of 2 years.
- 3) You answer the questions in your group. If there are some questions you cannot answer, you bring them up next time the Community Mobilizer, or the Project leader come, or you organize to ask the local health worker.

##### More knowledge - Why Breast is Best

- For the first 6 months, the child should be fed with breast milk and nothing else. It is better than any baby food you can buy. The child should not be given extra water or tea, even in hot weather the breast milk contains enough liquid to keep the child hydrated.
- After 6 months, additional foods should be added in the form of porridge or gruel, with one type of food at a time.
- Breast milk contains all the nutrients a child needs for the first six months.
- Exclusive breastfeeding reduces the risk of diarrhea and other infections. Giving any other food or drink increases the risk of diarrhea.

- Exclusive breastfeeding means that the mother is unlikely to become pregnant.
- In the first days of lactation, the breast milk contains colostrums. Colostrums are known to contain immune cells and antibodies that transfer immunity to the baby. It is like giving the child its first immunization. After a week, there is no more colostrum in the breast milk.
- It is very important that the newborn child starts suckling within one hour of birth - the mother and child should be in skin contact immediately after birth.
- The mother should feed the child on demand, when the child wants to feed, at least 8-10 times over 24 hours, and let the child suckle for as long as he wants, day or night.

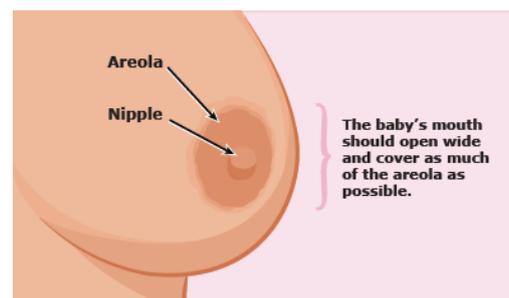
### The breastfeeding mother needs:

- Extra food, the equivalent of one extra meal a day.
- She especially needs more meat, poultry, offal and fish, and more vegetables and fruits. If animal food is not available make sure she eats legumes.
- Enough to drink, and drink whenever she is thirsty.
- More rest if possible.



### Why other feeding can be harmful:

- Other milks, such as tinned milk or the milk of animals, do not protect babies from diseases.
- Other milks can cause sickness and death. If the bottle, nipple, or water used to make the milk powder is not boiled long enough, the baby will swallow harmful germs and get diarrhea.
- When babies drink from the breast, they use their tongue to suckle, or “milk” the breast. It is very different from what a baby’s mouth does when sucking on a bottle. By sucking on a bottle, the baby may forget how to suckle well on the breast. If the baby does not suckle enough on the breast, the mother’s milk supply will decrease, and the baby will stop feeding from the breast completely.
- Bottle-feeding costs a lot of money.
- Some parents try to make the milk or formula last longer by using less powder or more water. This makes a baby malnourished, grow more slowly, and get sick more often.



### Homework

Use what you have learnt in this lesson, and teach it to your young daughters or young mothers in the village. In this way, you can help children to grow healthy.

## Month 5

### Healthy babies

#### Week 3 – When and how to start your baby on complementary food

Lesson: Avoid malnutrition of babies by knowing how to feed them

##### Introduction

The time when a child is most likely to become malnourished, is from when he is 6 months to 2 years old. This is because breast milk by itself does not provide enough energy for a baby after it is 6 months of age. Other foods are needed, but often the foods given do not contain enough energy. If the mother also stops breastfeeding, the child is even more likely to become malnourished.

When the baby is 6 months old, start giving him other foods in addition to breast milk. Always give the breast first, and then the other foods. It is good to start with gruel or porridge made from the main food, such as maize meal, or rice cooked in water, or milk.

Then start adding a little bit of vegetable cooking oil for extra energy. After a few days, start adding a little bit of other foods like sugar, or honey. But start with just a little of the new food, and add only 1 new type of food at a time, or the baby may have trouble digesting it. These new foods need to be well cooked and mashed. At first, they can be mixed with a little breast milk to make them easier for the baby to swallow.

Remember, a young child's stomach is very small and cannot hold much food at one time. So feed him often, and add high-energy food, like a little oil to the food. Just a spoon full of cooking oil added to a child's food, means he needs to eat only  $\frac{3}{4}$  as much of the local main food, to meet his energy needs.



##### **For a child of this age to be healthy, we should:**

- Keep feeding him breast milk as much as before.
- Feed him other nutritious food as well, always starting with just a little.
- Feed him at least 5 times a day, and give him snacks between meals.
- Make sure the food is clean and freshly prepared. Filter, boil, or purify the water he drinks. When he gets sick, feed him extra well and more often, and give him plenty of liquids to drink.

## Instruction

- 1) The coordinator presents the lesson.
- 2) Discuss the arguments for breast-feeding until 2 years, and share your own experiences.
- 3) Go through the steps on how to feed a baby, and learn them by heart.

## More knowledge

### How and what to feed your child from he is born till he is 2 years

#### Before giving birth

Eat nutritious food.  
Avoid taking alcohol.  
Avoid HIV and other STI infections.  
Take drugs or medication only if recommended by your doctor.



#### From birth to 6 months

Breastfeeding only.  
Breast milk is a complete diet for a baby for the first 6 months of life; breast milk also protects the child against diseases.



#### After 6 months

Start complementary feeding.  
Give the child soft porridge and fruit juice by spoon. Keep the spoon clean.  
Continue breastfeeding.



#### 6 months - 1 year

Breastfeeding + soft foods.  
Continue breastfeeding.  
Give soft foods by cup and spoon.  
Add sugar and oil.

#### 1 - 2 years

Breastfeeding + other foods.  
Breastfeed at least 3 times a day.  
Give more adult foods.  
Give at least 5 meals a day.



## Homework

Use your knowledge to invent good local foods for complementary eating. Share them with young mothers, and warn them against the use of premade baby foods and bottle-feeding.

## Month 5

### Healthy babies

#### Week 4 – Cooking demonstration

Lesson: Complimentary food for children from 6-12 months

##### Introduction

If your 6 – 8 month old baby is just starting to eat solid food, you should only prepare a very small amount of food. Remember, that the mother's milk continues to be more important than the solids. Do not worry if the baby will not eat more than a few bites, as this is a new experience for her.

From 6-12 months, breastfeeding should continue to provide half, or more of the child's nutritional needs, and from 12-24 months, at least one-third of her nutritional needs. In addition to giving nutritious food, breast milk continues to provide protection to your child against many illnesses, and it provides closeness and contact between you and the child, which promotes psychological development.



Appropriate complementary foods need to start from 6 months, and continue gradually until the child is 2 years. In addition to breast milk, it should provide nutrients - energy, protein, fat, vitamins and minerals - to help meet the growing child's needs. Remember to start slowly with only one type of food, and then step it up with more types of foods over time.



Make the meal for the family the normal way, and put a portion aside for the baby without the seasoning (no salt or sugar should be added to a baby's meal). Maybe she will have the same vegetables and potato as you, but not the rest of the meal, for now. However, by the time she reaches the age of 2 years, she should be eating the same food as the rest of the family.



Once weaning is established (meaning weaning your baby onto solid food), you can add more different types of food.

Mash potatoes to a thin paste; mash pumpkins to a thin paste; boil moringa leaves, or use any boiled water from other green vegetables, and use it when making paste of potatoes or pumpkins. Be sure to follow the baby's lead and keep trying at regular intervals until she will happily eat meals that have been mashed. Each baby will progress at her own pace.

At the next stage, you can prepare a thin porridge. Cow's milk can be added to porridge, if you have it, but it should not be given as a drink until after one year. Any soft fruits can be used, such as mashed banana, or juice from watermelon.

You can also use mashed, boiled kapenta, or mashed, boiled eggs.  
Do not buy premade baby food. It does not contain the same amount of nutrients as the fresh produce, and it has been made to last longer by adding non-healthy substances.

### **Instruction**

- 1) The coordinator has prepared the lesson.
- 2) Read the recipes, and discuss other meals that can be made from local foods.
- 3) Divide into 3 groups, and prepare one recipe in each group.
- 4) Follow the instructions in the recipes.

### **More knowledge – how to cook**

#### **A. Orange mash with banana – serves 4**

##### ***Ingredients***

*2 large oranges*  
*1 banana*

##### ***Method***

*Wash and cut the oranges in half.*  
*Squeeze juice out and add to the banana.*

*Mash - and it is ready to eat.*



#### **B. Mashed pumpkin with peanut butter – serves 4**

##### ***Ingredients***

*¼ pumpkin*  
*1 tablespoon moringa powder*  
*2 tablespoons peanut butter*  
*Salt to taste*

##### ***Method***

*Peel the pumpkin and scoop the inside. Cut into small pieces.*

*Boil until ready.*

*Mash the pumpkin until it becomes fluffy.*  
*Add the peanut butter, moringa and salt.*  
*Mix until smooth. Serve hot.*



#### **C. Millie meal and bean porridge - serves 4**

##### ***Ingredients***

*1 cup millie meal*  
*5 cups of bean flour*  
*1 teaspoon oil*

##### ***Method***

*Mix the bean flour with a little water to make a soft paste.*

*Add more water, boil and cook slowly.*

*When cooked through, add the millie meal and mix well.*

*Cook for another 15-20 minutes. Serve hot.*



### **Homework**

Cook the meals for your own baby, if you have one between 6 months and 1 year. Try to make mash or porridge of other foods. Powder from moringa leaves can be added to most of these dishes and will provide even more vitamins. Share your recipes with friends and neighbors. Teach your children how to cook.



## Month 6

### Healthy children

#### Week 1 – The most common childhood diseases

Lesson: What makes you and your child feel sick

##### Introduction

You have probably been sick before. How did you know that you were sick? If your body is infected or affected by anything that does not belong to the body, it gives out warning signals. This happens to everyone, and you start to feel that you are sick:

- you get tired,
- you get a head-ache,
- you get a stomach ache and maybe loose motion,
- your nose starts running, you start to cough or get fever.

An adult will notice and recognize these signals fast, and do something to get better. It is different with children, because they do not know the warning signs. But usually they will cry when they feel unwell.

When you know the signals and what to do, you need to do it. But if the child feels sick, especially if he has a high fever and you do not know why, it is important to get help from a doctor.

##### Instruction

- 1) The project leader prepares and gives the lesson.
- 2) The nurse is invited to explain what to do in the case of each disease.
- 3) Share your own experiences with child diseases. Ask the nurse questions.
- 4) Discuss if you should make a common saving, to ensure money for treatment of sick children.
- 5) Follow up on your plans for the orphans, and make a new plan for this month.

##### More knowledge

###### Symptoms you should never ignore:

Runny nose and sore throat: Give the child lots of hot tea with lemon and vitamin C tablets, if you can get it. Give him a lot to drink and let him sleep, if he wants to. If the throat is sore, gargle with warm salt water (1 teaspoon salt in a glass of water).

Stomachache or feeling like vomiting: This is usually a sign of having eaten some spoiled food. The food should be discharged, either by vomiting or by bowel motion. Then it is usually over in a couple of hours. Give the child a lot to drink.



An itchy rash or a scratch with an infection: This should be washed thoroughly with clean water and soap. Do it 3-4 times.

High temperature / fever: A high fever is a sign of something being very wrong. It could be malaria, pneumonia, TB or another illness that needs to be treated with medicines. It might turn out to not be anything serious, but do not take any chances.

What can be done immediately: Give lots of liquid. Wet the child with cool (not cold) water and fan, take off his clothes to cool the body. If he keeps crying, give him acetaminophen (paracetamol) or ibuprofen in the following dose:

1 tablet is usually 500 milligram.

Adults: 500 milligram (mg) – 1 gram (g) = 1 or 2 tablets

Children 8-12 years: 500 milligrams – 1 tablet

Children 3-7 years: 250 milligrams – ½ tablet

Children 1- 2 years: 125 milligrams – ¼ tablet

Babies less than 1 year: 62 milligram – 1/8 tablet

Running stomach / diarrhea: This makes the body lose a lot of fluid, and can easily lead to dehydration, especially if the child is also vomiting. If the child is still breastfeeding, give breast milk. It is also important to use rehydration drinks as soon as possible. Diarrhea can also be a sign of parasites in the stomach, which needs to be treated with medicine. Feed him well as soon as he is able to eat again.

Diseases that easily spread from child to child: *Chickenpox, measles, mumps and whooping cough.* It takes 1-3 weeks from when a child has contracted these diseases until the first signs appear. Keep the child away from other children.

Chickenpox is small, red, itchy spots that turn into pimples or blisters.

Measles is a severe virus that is especially dangerous for children who are malnourished. It starts like a cold with a fever, runny nose, red sore eyes and cough. After 2 or 3 days, tiny white spots appear in the mouth.

Mumps begins with a fever, and pain on opening the mouth. After 2 days, a soft swelling appears below the ear.

Whooping cough begins like a cold with a fever, runny nose, and a cough. Two weeks later, the whoops begin.



*Chickenpox*

*Measles*

*Mumps*

*Whooping cough*

***For any of these symptoms, seek help from a clinic if not improving within the first day.***

## **Homework**

Do what you can to help your neighbors whenever they have a sick child.

## Month 6

### Healthy children

#### **Week 2 – Signs of dehydration and how to make drinking water safe**

Lesson: What happens when you lose water and what to do about it?

##### **Introduction**

Your body needs water. Actually, your body consists mainly of water. About two-thirds of your weight is water. Most of this water is within your cells, as part of your blood, in your organs, and in your kidneys and urinary bladder. A large number of chemical components can dissolve in water, and water has been the main contents of all cells since the first living organisms evolved. Your body uses some of the water to “run its business”, so to say.

Children are running around and adults are working during the day, and so we cannot avoid losing water from sweating. We also lose water when urinating.

A grown up person will lose about two liters of water in a day. A small part of the water can be replaced with the food we eat, only about one-fifth. The rest has to be replaced by drinking fresh water. Without drinking water, you could only keep alive for about a week.



If you have a fever, diarrhea or are vomiting, you lose a lot of water very suddenly, and if you are not drinking an equal amount, you may become dehydrated, become unconscious and even die. Dehydration is dangerous, especially for a small child who does not know how to act.

##### **Instruction**

- 1) The coordinator has prepared to give the lesson and a demonstration of how to clean water.
- 2) Share your experiences with de-hydration.
- 3) Discuss how you use to keep water clean and decide if it is good enough.

##### **More knowledge**

When a person has diarrhea, the body loses more water and minerals than it receives. This happens mainly when the diarrhea is persistent, and it will be worse if accompanied by vomiting.

The loss of water and salts has these effects: the volume of blood is reduced, which makes the heart beat faster to compensate; the production of urine and tears is reduced; the mouth and tongue become dry; and the skin loses its elasticity. If the dehydration worsens, and the heart cannot beat fast enough to keep the blood flowing, (low blood pressure), the person becomes inactive, and may collapse due to circulatory shock -and die.

## Signs of dehydration:

It is very important that all people know the signs of dehydration, and what needs to be done to prevent it, or treat it:

- thirst is often the first, early sign of dehydration
- little or no urine, the urine is dark yellow
- sudden loss of weight
- dry mouth
- sunken, tearless eyes
- sagging in the 'soft spot' in infants
- loss of skin elasticity
- a child with dehydration is often agitated and irritable



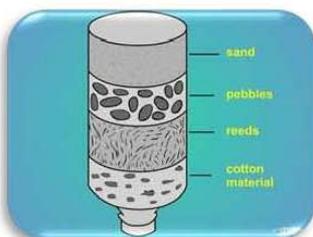
Severe dehydration can cause rapid and weak pulse, rapid deep breathing and lead to shock.

## Treatment at home

**GIVE PLENTY OF FLUIDS.** Anyone with diarrhea, **even without dehydration**, should take more liquids than normal to prevent dehydration. In the cooking lesson, you will learn how to prepare, and use homemade re-hydration drinks.

## Water for drinking

Water for drinking should be safe, meaning clean, to avoid bacterial and amoeba infections. Water from a mountain spring is usually safe for drinking. With the increased number of people around, increased use of fertilizer, and increased pollution, most other water sources are not safe for drinking. It has to be cleaned.



*Water can be cleaned by being filtered, boiled or chlorinated*

You can also clean water by radiation from the sun:

Fill some clear plastic bottles (PET), with screw caps, 3/4 with clear water. Close and shake at least 20 times to get air into the water. The oxygen helps to kill the bacteria. Fill up the bottles completely with more water, and close well (no air inside as the bubbles will reflect the sun). Place the bottles lying down in a sunny place for at least 6 hours. Keep the water in the same bottle until you need it.



## Homework

Use the method for cleaning drinking water that suits you best. But do clean it.

## Month 6

### Healthy children

#### Week 3 – No to malaria – get rid of mosquitoes

Lesson: Actions we can take to avoid being bitten, and to keep mosquitoes away

##### Introduction

Malaria is not an easy disease to avoid, but it can be done. You cannot be vaccinated against it - but the people in a village, and the students and teachers at a school, can decide to get rid of mosquitoes by taking all the necessary actions to get rid of them, and destroy their breeding places.

You get malaria by being bitten by a mosquito.

The mosquito has malaria parasites living inside it. The mosquito does not have malaria; it is only carrying the malaria parasite. When a mosquito bites and sucks blood from an infected person, the parasites in the person's blood are picked up by the mosquito, and next time the mosquito bites a human being, the parasites are passed on.



Each year Malaria hits approximately 200 million people in the world, and kills between 700.000 and one million. 90% of all deaths from malaria are in Sub-Saharan Africa, and most of them are young children. Malaria is one of the most common infectious diseases, and causes an enormous public health problem.

Most of you already know the symptoms of malaria. They include fever, chills, nausea, flu-like symptoms, light-headedness, shortness of breath, anemia and maybe a feeling of tingling in the skin.

In severe cases, malaria can lead to coma and death.

To stop malaria you must kill the mosquitoes, and you must protect yourself and others around you so they are not bitten.

In this lesson, you will work with ways to get mosquitoes away from your house.

##### Instruction

1. The Coordinator has prepared the lesson and reads the text.
2. List all the people you know who have suffered from malaria, and tell what you know about how they recovered.
3. Discuss the actions shown on the picture. Are they useful for you? Which could you do at home and which could you do together?
4. Decide to send a delegation to the clinic to ask free of cost mosquito nets for children and pregnant women in your village.

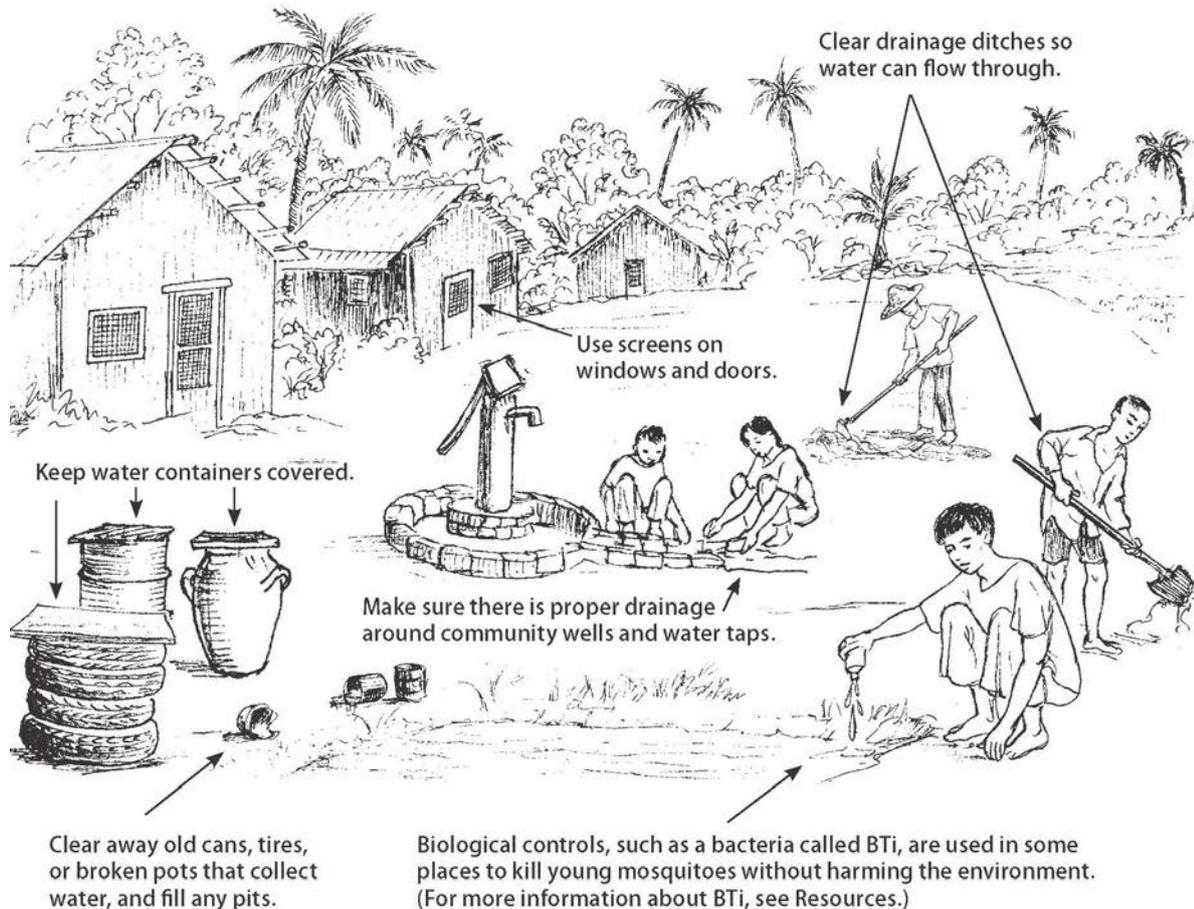


## More knowledge

Two important methods to avoid malaria are:

1. Avoid being bitten: sleep under treated mosquito nets at night, keep mosquitoes out of the house by using screens for the windows and doors, use repellants and wear long trousers and shirts with long sleeves in the evening.
2. Keep mosquitoes away from your house. Mosquitoes live in long grass, and their larvae live in stagnant water.

To get rid of mosquitoes you can cut long grass around the house, fill in water pits where mosquitoes can breed, and make sure that water is not collecting in empty cans, or in rubbish lying around. Mosquitoes do not travel far, so if you clean up regularly, there is a chance of keeping them away.



Finally, you can plant lemon grass and Artemisia around your house. These plants have a scent that mosquitoes do not like.



Artemisia and lemon grass are common plants in Zambia.

← Artemisia

Lemon grass →



## Homework

Ensure your family, especially small children, is not bitten by mosquitoes. Take action to get rid of mosquitoes at home and in the village.

## Month 6

### Healthy children

#### Week 4 – Cooking demonstration

##### Lesson: Re-hydration drinks and healthy meals for sick children

##### **Introduction**

When someone is sick, it is important to eat healthy foods, which include all food nutrients such as protein, carbohydrates, healthy fats, vitamins and minerals.

**Diarrhea:** Eat soft and nutritious food, like vegetable soup, chicken soup or mashed sweet potatoes. Avoid greasy food. Soups give you fiber, and it contains so much water that it will fill you up with fewer calories. Fruits are also good, for example oranges, which you can peel and eat fresh, or squeeze by hand to make juice. Drink plenty of water and other fluids. For diarrhea, grated apples can help to stop it, and also give re-hydration drinks, as diarrhea quickly dehydrates you.

**Constipation:** To prevent it and to treat it, eat food high in fiber, such as fruits, and grains such as sorghum, corn and vegetables.

**Losing weight:** If you are losing weight when you should not, you should eat as often as you can throughout the day. Also, take snacks with a high-energy content, such as salted groundnuts, hard-boiled eggs, or salted sunflower seeds.

**Other common illnesses:** Garlic is a good medicine for preventing or treating a number of diseases. It can be used fresh, crushed, dried, cooked with food and used in tea. Garlic lowers blood pressure, and it has a very good source of vitamin C. If you crush and chop the garlic, you will activate the enzymes and will obtain many benefits.



Colds and flu can be treated with garlic tea, gargling with warm salty water, and by eating vitamin C tablets as soon as it starts.

##### **Instruction**

- 1) The coordinator has prepared the lesson.
- 2) Discuss your own experiences with taking care of sick children, and share good methods.
- 3) Read the recipes. Make yourself a system for remembering how to make re-hydration drinks, as it is very important to be able to give these immediately in case of heavy diarrhea.
- 4) Divide into 2 groups and prepare both the re-hydration drinks and a recipe in each group.
- 5) Follow the instructions.

## More knowledge – how to cook

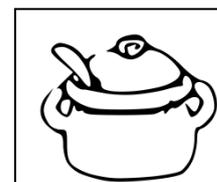
### A. Dehydration drink with powdered cereal

#### **Ingredients**

1 liter of water  
½ teaspoon of salt  
2 handfuls of powdered  
Cereal (Rice is best)

#### **Method**

Put salt and cereal in the water.  
Boil for 5-7 minutes to form a  
liquid gruel.  
Cool the drink quickly and give to the child.  
Taste the drink each time you give it to the  
child, as cereals can spoil in a few hours in hot  
water.



### B. Dehydration drink with salt and sugar

#### **Ingredients**

1 liter of clean water  
½ level teaspoon of salt  
8 level teaspoons of sugar  
(not molasses)

#### **Method**

Mix the ingredients.  
Before adding the sugar, taste  
the drink and be sure that it is less  
salty than tears



**To each drink, you can add half a cup of fruit juice, coconut water, or mashed ripe banana, if available. This provides potassium, which may help the child accept more food and drink.**

### C. Mashed cassava - serves 4

#### **Ingredients**

3 cassavas cut in cubes  
1 tablespoon cooking oil  
1 tablespoon moringa  
powder  
½ cup fresh milk and a little salt

#### **Method**

Boil cassava until done  
Add milk and mash the cassava.  
Add oil and salt.  
Mix well and it is ready to serve.  
Serve while it is hot.



### C. Mashed orange fleshed sweet potatoes - serves 4

#### **Ingredients**

1 Cup of cooked sweet  
potatoes  
2 tablespoons peanuts,  
roasted and peeled

#### **Method**

Wash the potatoes.  
Cook with skin on, in a little water  
for a short time.  
After cooking peel and mash the potatoes.  
Mix it all and stir well.



## Homework

Make it routine to have the ingredients available to make re-hydration drinks. You might need it for your own children, and for being able to help other children with diarrhea.

## Month 7

Give our children the best start in life

### Week 1 – How children grow and develop during the first two years

Lesson: Know what to do to support your child's development

#### Introduction

When we talk about “grow”, we talk about growing in physical size and the physical development of the brain.

Whereas, when we talk about “development”, we mean learning new activities, getting new knowledge, and learning new skills.

The very young child is developing in four very important areas:

- ❖ The brain and the senses
- ❖ The emotions
- ❖ The movement
- ❖ The language

In these early first years, all learning is through the senses. The baby uses his whole body to explore the world around him. He looks, listens, touches, tastes, smells and soaks up impressions like a sponge.

Parents need to know what to do for their child to grow up healthy, and develop to its full potential during its early years.

They are the ones who have the responsibility for the child, and the ones who know the child best, and will be the first to notice if something is wrong.

#### Instruction

- 1) The coordinator prepares and reads the lesson.
- 2) List 10 points that are important for a child's development.
- 3) Give examples of how you can support the 10 points.
- 4) Follow up on your plans for the orphans, and make a new plan for this month.

#### More knowledge

The very young child is developing in four very important areas:

- 1) The brain and the senses
- 2) The emotions
- 3) The movement
- 4) The language

We will look at each of these, and look at what the parents and the family around the child can do to help development in these areas.



*6-8 months –  
Sit up alone*



*12-14 months  
walk 10 steps alone*

## 1. Development of the brain and senses

Well before birth, a baby in the womb is tuning into the sounds of its mother's voice. When the baby is born, all its senses are in working order. A baby does not need to learn to see, hear, touch, smell or taste. Over the first few months, the baby's brain develops rapidly, and by the end of one year, it has doubled in size.

**What you, the parent can do:** Surround the child with things to touch, taste, feel, smell and see. Move babies into different positions often to see more. A baby of six months strapped to his mother's back also needs stimulation. A baby needs to be shown things to develop his brain.

## 2. Development of emotions

The first area of the brain to develop is emotions. Newborn babies can only experience distress or contentment. Around the age of two months, feelings of joy, sadness, jealousy, understanding, pride, and shame begin to develop.

**What you, the parent can do:** Cuddle, have skin contact, talk to, and provide your baby with stimulating experiences. In other words, provide the baby's brain with stimulation and loving care.



11 to 18 months  
single words

## 3. Development of movement

At birth babies can move their limbs, but in an uncontrolled fashion. But a baby's brain develops fast, so around the age of two months, infants can reach out and grab things. At four months, the baby begins to focus both eyes on a single object. Soon the baby will be able to move in a controlled way, roll over, sit up, and walk. He will try to grip and hold things, lift his head to look at things, listen to sounds, make sounds, smile, try to stand up, and begin crawl or walk towards you.

**What you, the parent can do:** Give the baby lots of opportunities to strengthen his muscles: roll, sit, crawl, stand and explore. Place interesting objects within his sight, and/or hearing. Interact with him, and take care that the surroundings are clean and safe. It is good to make toys for the child to have something to play with.



Three years -  
short phrases

## 4. Development of language

A six-month-old can recognize the vowel sounds that are the basic building blocks of speech. Around the age of twelve months, the baby is ready for one of the most magical moments of childhood – saying his first words. Language skills are sharpest early in childhood, but they continue throughout life.

**What you, the parent can do:** Today we know that talking to a baby speeds up the process of learning new words, because babies need to hear the sounds in their language many times before they can put the sounds together.

## Homework

Engage your older children in playing and talking with the small ones, and make toys such as soft balls made of straw or cloth, dolls or things that can move.

## Month 7

### Give our children the best start in life

#### Week 2 – What small children need, to develop to their full potential

##### Lesson: How to support development of senses, emotions, movement and language

###### Introduction

We have learned that children need healthy food to develop their bodies and brains.

The health worker told us that children need vaccinations.

We understand that children should not be sick, and if they are, something needs to be done to get them well.

We also learned in the last lesson how children need support to develop their brains and senses, emotions, movements and language.

In this lesson, we will take a look at all the children of the members of the Nutrition Action Group, and evaluate them according to the criteria above. If anything is lacking, we will discuss what needs to be done, and how it can happen.

###### Instruction

- 1) The Coordinator reads the introduction and leads the meeting.
- 2) One by one, the points are discussed, and it is decided if anything has to be done.
- 3) For each action to be taken, agree on whom, how and when.

###### More knowledge

This time around, we will put our own knowledge together and establish our own plan of action to give our children the best start in life.

Remember that each child develops in his, or her, own pace and children should never be compared.



###### Healthy food



###### Good hygiene



###### Vaccinations



Follow the list, and discuss one point at a time. Add more points if you feel something important has been left out. Ask questions if you do not agree with each other's answers. Discuss if something has to be done, and what action to take. Some issues can be solved by the family who has the child. Others can be better solved if you go together and help each other.

1. Did all small children get the monthly growth check up?
2. Have all the eligible children been vaccinated?
3. Have the children been treated for worms recently?
4. Does the family have a good system for cleaning water?
5. Are the house and its surroundings clean?
6. Is there a good system for waste?
7. Do the children sleep under mosquito nets?
8. What other actions have been taken to avoid mosquito bites?
9. Does the family have a latrine, and if not, is there a good system on defecating and washing hands?
10. Is water and soap available for hand washing?
11. Are any of the children severely malnourished?
12. Are any of the children mildly malnourished?
13. How many families have established gardens?
14. Are we satisfied that all families have managed to eat from all the food groups in one way or the other?
15. Are any of the children sick right now?
16. Are any of the children physically handicapped? (This can be bad eyes, hard of hearing, lack of speech, restricted in movements or other)
17. If they are, are they getting help? Whom can we go to for help?
18. Are any of the children mentally disturbed, or developing too slowly?
19. Do the children have appropriate clothes? If not, whom can we ask for help?
20. Are all the children progressing in learning?
21. What toys do they have, and what more could you make for them?
22. Do the children have good routines?
23. Do the older children have good routines, meaning what are the systems for when they have to help in the family? Do they go to school if they are of school age? When do they do homework? When do they play?



### Homework

Organize together with your family to do what you have agreed should be done in your home. Participate in the actions you have agreed on. It might be with a small group or the whole Nutrition Action Group together.



## Month 7

### Give our children the best start in life

#### Week 3 – The importance of going to school

Lesson: What can we do to make it possible for our children to go to school

##### Introduction

In the old days, children grew up as a part of a family and learned all the skills they needed from their parents, siblings and grandparents. The child would most likely get the same position as his or her parents, so a farmers' child would learn to farm, an artisan's son would learn the skill of his father, and a girl would learn the skills of being a mother. Today our world is more complex. Many more skills are needed for society to function. Even the ability to be able to learn is an important skill, as many people will experience the need of learning a new skill, as the one they were trained in eventually disappears.

Most parents are eager to help their children to learn good skills, and hope they will get good jobs when they grow up. They also hope for their children to be happy in life, and do their best to give them a good cultural education, and learn life skills they enjoy, for example sports and music.

Today parents are helped by the schools to train their children, and often the children need to learn skills that the parents do not even have. Of course, children need to be able to read, write and use calculations. But they also need to be able to live among many different kinds of people, people from other cultures or even other countries, who speak other languages. And most importantly, they need to believe in themselves, and know their rights in society to be able to work together on creating a society with more equality, and without poverty.



##### Instruction

- 1) The Coordinator prepares the lesson. If the village has a preschool, she could invite the preschool teacher to participate in the lesson.
- 2) Are all your children going to school? If not, why, and what could you do to make it possible for all of them to go to school? How many years? What can be done if a child has dropped out of school? Should you do something for more children to attend secondary school or Open School?
- 3) If there is no preschool in your village, you could discuss to start one. Maybe you do not have a trained preschool teacher, but a young girl who is interested in working with children, could perhaps run the preschool with some help from a teacher from the school.

## More knowledge

Let us discuss how we as parents can do our best to prepare the children for this future. Let us discuss the schools.

Thinking of what is written above, it is clear that a child who does not attend any school will be left behind. So why are many children not going to school?

There are many reasons. First of all, the children might be needed at home to help with the daily work. Secondly, it does cost some money to send a child to school. Even if the school itself is free, there are demands for uniforms, books and other things. For secondary schools, there is also often a problem with transport.

And finally, there is the fear from many parents who have not gone to school themselves, that the children will not manage, and that the teachers will look down on them when they come to the school for parents meetings.

Here, it is important to remember, that the schools are there for the sake of the children, and that it is the teachers task to help all children to learn, and get through school with a good knowledge.

Remember also, that a school has – or ought to have - a parent-teacher council, where parents and teachers work together to make the school function well.

One way to help children to get a good start in life is to send them to a preschool. You might say, that in preschool children are just playing. And that is correct. But children learn by playing, and in a preschool, the preschool teacher can help the children to learn more by making plans for many different kinds of play. The children also learn to be together with many other children of the same age, they get used to listening, to try out new things, to speak and to work together. It is easier for children to start in school, when they have been used to being in preschool.



Parents who work together can do many things to make a local school better. They can ensure that the school is clean and well maintained, by organizing building actions together. They can start a school garden, and produce food together with the teachers and children, so that all children can get a meal at the school. This can be of great help to poor children who might not eat well from home, and are slow learners simply because they are hungry. As parents, you can organize that the uniforms are stitched locally, and that the prices are kept at a minimum.

## Homework

Decide what you can use from today's discussion on going to school, and discuss it with your family. Participate with the Nutrition Action Group, and the schools to get all children to attend school. Maybe start a preschool together.



## Month 7

Give our children the best start in life

### Week 4 – Cooking demonstration

Lesson: The importance of proteins for growth

#### Introduction

Proteins are really needed in our body. They are essential for normal brain functions and normal growth – it is clearly important for children, teenagers and pregnant women, as well as for the rest of us.

Proteins are also important for tissue repair, for immune defense, and for producing essential hormones and enzymes. You can also burn proteins and get energy from them.

40% of your food should consist of good proteins.

You can get proteins from vegetarian foods such as beans, lentils, moringa, nuts and seeds, and from animal foods such as meat, poultry, fish, eggs and milk. It is not a problem if animal proteins are not available. Millions of people live on a vegetarian diet.



#### ***Legumes are really good for you***

Legumes are a common name for beans, peas, lentils and peanuts. Legumes provide the body with an excellent source of protein, and they have a lot of fibers, which acts as a broom to sweep out your digestive system. It is a healthy substitute to meat. Legumes also contain many minerals and carbohydrates, which are slowly digested and absorbed. Legumes can be grown easily, thus making them much cheaper than meat. They can be eaten in many different ways.



#### ***Tips to prepare legumes***

- \* *Dried beans, peas and round nuts require soaking in water at room temperature. Soaking allows for a shorter cooking time, and it preserves most of the nutrients. It also minimizes their gas content.*
- \* *After soaking, rinse the beans and put in a pot. Cover the beans with three times their volume of water. Add garlic and ginger as desired. Bring to boil. Reduce the heat, let simmer gently uncovered, stirring occasionally. The cooking time depends on the type of beans, but start checking after 45 minutes. Add more water if the beans become uncovered.*
- \* *Add salt, tomatoes and onions near the end of the cooking time, when the beans are just tender. If these ingredients are added too early, they can make*

*the beans tough, and slow down the cooking process.*

- \* *The beans are done when they can easily be mashed with a fork.*
- \* *Store dried legumes in a closed container, in a cool, dry place to keep for a longer time. 2 cups of dried beans yield about 5 cups of cooked beans.*

### **Instruction**

- 1) The coordinator has prepared the lesson.
- 2) Read the recipes, and remember the good reasons for eating proteins.
- 3) Divide into 3 groups, and prepare one recipe in each group.
- 4) Taste the food. It is important that the food tastes good.

### **More knowledge – how to cook**

#### A. Fresh green soya beans with tomatoes, and moringa – serves 4

##### **Ingredients**

*1 cup fresh soya beans  
1 tomato and 1 onion  
1 handful moringa leaves  
3 cloves garlic and salt*

##### **Method**

*Place soya beans in pods in boiling water for 5 minutes.  
Split the pods and squeeze out the beans.  
Boil for 10-15 minutes.  
Fry onion and tomato and add to the soya beans - let it simmer for 10 minutes, add moringa, and let simmer one more minute. Add salt.*



#### B. Cow pea porridge – serves 4

##### **Ingredients**

*1 cup mealy meal  
½ cup cowpeas  
1 table spoon groundnut powder  
4 cups of water*

##### **Method**

*Mix mealy meal with water to a smooth paste.  
Bring to boil and cook until smooth and light.  
Mash the cow peas and mix into the porridge.  
Add peanut butter. Simmer for 2 -3 minutes.*



#### C. Mufete from Angola - serves 4

##### **Ingredients**

*2 small fish  
1 tablespoon vinegar  
3 cloves of garlic  
1 tomato  
1 onion  
Ginger, salt and pepper*

##### **Method**

*Marinate the fish with garlic, ginger, salt, pepper and vinegar.  
Make a charcoal fire and roast the fish.  
Prepare sauce by frying onion in cooking oil, add tomatoes, salt and garlic.  
Pour sauce over the roasted fish and serve.*



### **Homework**

Cook the meals for your family. If needed, add more spices to get a better taste. It is important that the food taste good when you want to introduce new recipes. Tell your family and friends why they should eat proteins and where to find them.

## Month 8

### Healthy families

#### Week 1 – Family planning and contraception is a woman’s choice

##### Lesson: Why and how to decide on Family Planning

###### **Introduction**

In Zambia all hospitals, health centers, and clinics can provide Family Planning services. Assistance in Family Planning is one issue that can profoundly help a poor family to improve its living conditions, economy as well as health. It is difficult to take good care of many children when you are poor. And it is hard for a woman to be pregnant again and again, without having recovered from the last birth.



Whatever support you can get from the health system, one thing is sure: family planning starts with you and your family getting opinions on what is best for you. You must make decisions, and find out how the health system can help you to carry them out.

In this lesson, you will learn more about the different methods that can be used for birth control. You will start with a general discussion about how family planning can help you. Making the decisions is a longer process, which also includes discussions and agreements with your husbands.

###### **Instruction**

- 1) If possible, invite a health worker, or a nurse to tell you how the health system can help you with family planning – and demonstrate the methods that are available - or the coordinator can do a presentation, and you can go through the lesson by using your common knowledge.
- 2) Discuss the possibilities, the advantages, your reasons for hesitating, and how your ability to care for your family could be improved by using Family Planning.
- 3) Follow up on your plans for the orphans, and make a new plan for this month.

###### **More knowledge**

Why should you, as a woman, think about family planning?

Because, you have to think about your health! Is your body strong enough to have another child? If the pregnancy makes you weak, how will you take care of your family? In some cases, another pregnancy could even threaten your life, and the life of the child.

The idea of Family Planning is to have the number of children you want, when you want them. When a couple decides to plan when to have children, they can choose between several methods. These are called methods of family planning, or contraceptives.

To make a decision, a couple could consider the following questions:

**Too early:** Pregnancy before the age of 18, is generally not healthy for a woman, and the young family might not have a sustainable income.

**Too late:** Pregnancy after the age of 35 increases the health risks to the child and the mother. After the fourth pregnancy, the mother and her baby is at a greater risk.

**Too many:** Do you really want to have more children? Can you take good care of them? Children need food, clothes, to go to school and much more. Have you considered how much one more child would cost?

**Too close:** For the health of the mother and the child, there should be an interval of at least two years between each pregnancy.

**There are many methods to choose from. These are some of them:**

**Pills** – called oral contraceptives, is one of the most effective methods to prevent pregnancy. These do not prevent HIV, for that a condom must be used.

**Emergency contraception** – in cases of unwanted pregnancy due to rape.

**The male condom** – very effective when used properly.

**Intrauterine device (IUD)** – to be inserted inside the womb by a midwife.

**Injections** – a special injection given to a woman regularly.

When she stops, it can take 3-6 months to fall pregnant again.

**Breastfeeding** – Using only breastfeeding for 6 months can reduce the chances of falling pregnant.

**Homemade remedies** – such as washing the vagina with herbs or powders, or urinating after sex - are not effective and are often dangerous for a woman.

**Natural birth control methods** – such as measuring the mucus flow and body temperature to determine the days of the monthly cycle when a woman is not fertile, are different to control.

**For people who do not want more children** - Sterilization, of men and women can be done by cutting the channels through which sperms, or eggs are travelling. This cannot be reversed.

**Abortion** – Early termination of a pregnancy. In cases where a pregnancy is placing a woman's health or life in danger, or the child might be injured during birth, an abortion can be granted by the health authorities. If an abortion happens accidentally, a doctor should always be consulted to ensure that there are no complications. Abortions should be carried out in a clinic, or hospital. Some women choose to have an illegal abortion by an unqualified doctor due to an unwanted pregnancy. But, you should never choose this, as it is very dangerous for a woman.

**Homework**

Discuss with your husband or family if family planning is a good option for you. If you decide to do it, visit the clinic for sound advice.

## Month 8

### Healthy families

#### Week 2 – The reality of violence against women – talking about it

Lesson: Violence against women will only stop if we decide to stop it

##### Introduction

Every day, women are slapped, kicked, beaten, humiliated, threatened, sexually abused, and even murdered by their partners. But often we do not hear about this violence, because the women who are abused may feel ashamed, alone, and afraid to speak out. Maybe she has no means of supporting herself, if the man leaves her for another woman. Often, doctors, nurses, and health workers do not recognize violence when a woman or child comes to the clinic.



*Bruises might not come from accidents*

Violence not only hurts women.

It also affects their children, and the whole community. Talking about the abuse is the first step of changing it. The woman can try to find other women who have the same problems with violent or abusive men, and they can share ideas on how to stop it. Often, people think that domestic violence is a private issue that you should not interfere in. Therefore, it is needed to make domestic violence something you can talk about. Turn it into something that people will realize is very wrong, and should not exist. To change the minds and opinions of others is the first step in stopping domestic violence. Together you can play a role in creating new and healthy family traditions for relationships between men and women!

What are the pressures, that can prevent people in the area where you are living from doing things, that most people believe are wrong? In some places, it is the police. In others, it may be the military, the family, the workplace or religion. In most places, it is a combination.

Encourage people in the community to speak out against violence towards women, and to show their disapproval of men, who beat women. Try to use all the pressures that work in your area, to keep men from abusing women.



*Women protesting against violence*

##### Instruction

- 1) The coordinator presents the lesson, and leads the discussion. Before the meeting, she has investigated how domestic violence can be reported, and here the nearest support facility can be found. If possible, she can invite a

person from an organization working against violence to participate.

- 2) Discuss in general about domestic violence. What is domestic violence? How does it affect the woman, the children and the community? Why is it happening? How can we change this habit – how do we stop it?
- 3) Discuss if you know any examples of domestic violence in your family, or in the community. Discuss what to do when you experience a violent situation.
- 4) Talk about rape against women and girls, or boys, and share your ideas on what to do.

### **More knowledge**

A man can give many excuses for hitting a woman - he was drunk, he lost his head, or "she deserved it". A man might use violence to get what he needs, or what he thinks is rightfully his, as a man.

Whatever the reason might be, a man has no right to abuse a woman, neither by physical violence or in other ways. In Zambia, the Anti Gender Based Violence Act was signed by President Banda in 2011. The Act is a major step forward in the fight against gender-based violence. It gives hope to many women, and children who have been subjected to gender based violence, as it offers a comprehensive framework for protection and means of survival for victims and survivors, as well as the prosecution of perpetrators.

Violence is only one of the ways a man can use to try to control a woman. But all of them hurt the woman, and all revolve around power and control: Making threats, isolation, emotional abuse, sexual abuse, economic control, blame, make the woman feel guilty.

*It is never right to blame a person who was raped, especially not a child.*

One form of violence often leads to another. In many cases, verbal abuse becomes physical after a period of time. It may not always look like that at first. But a man might start pushing the woman, and bother her in many other small ways, and if this behavior works, it can become worse and even become violent. Not all women who suffer from this type of violence are beaten, but most women who are beaten have suffered this type of violence first.

In many couples, the man becomes violent for the first time when the woman is pregnant, maybe because he is jealous or because she cannot have sex.

A woman has the right to decide over her own body. This includes the right to say no to unprotected sex if she does not want more children, or if her partner has HIV, or another infection that is transferred sexually.

### **Homework**

Use your discussions from this lesson to speak up against violence towards women and children, in your own family as well as among your neighbors.

## Month 8

### Healthy families

#### Week 3 – Hygiene at home, and how to ensure good hygiene when cooking

Lesson: We repeat the rules for hygiene

##### Introduction

Hygiene in the home and the kitchen can be maintained by cleaning well, and making sure there is nowhere bacteria can develop. But what exactly is it we should do to prevent diseases, and ensure health for all in the family?

- \* What does good hygiene mean?
- \* What methods to use when preparing meals?
- \* How to store food in a safe manner?

Since hygiene and especially hygiene in the kitchen is a serious matter, it is worth it to use some time to repeat what it means.

In this lesson, we will work together to make good rules on how to keep our homes and kitchens clean, and how to prepare food in a hygienic manner.

##### Instruction

- 1) The coordinator leads the meeting. Together you go through the lists of things to consider for maintaining good hygiene at home, and in the kitchen.
- 2) Working in smaller groups, define the problems you face to maintain a high standard of hygiene, and find solutions together.
- 3) Share all the solutions with the whole Nutrition Action Group.
- 4) Each of the working groups make a small show on what to do, or what not to do, to maintain hygiene.

##### More knowledge

###### The 10 ground rules of hygiene

1. Hand washing prevents the spread of diseases.
2. Wash and clean more often when caring for sick people.
3. A clean latrine for every family.
4. No dirty or stagnant water.
5. Keep food clean and covered to avoid insects and rodents.
6. Keep control of garbage!
7. Clean means CLEAN.
8. Know your water, know how to clean it, and know why.
9. Keep animals and people separated.
10. Avoid contamination of stools (this means feces).



*Wash hands in running water*

## Hygiene in the kitchen

The hygiene you maintain in connection with the food you serve for your family is very important for preventing diseases, especially diarrhea and some parasitic infections. If children get diarrhea frequently, it can lead to dehydration and even death. But just losing weight due to diarrhea, can affect the children's health, and consequently, their growth and development. Frequent diarrhea of adults often means loss of income, as you are not able to work properly.

### A – Z rules to ensure good hygiene when cooking

- A. Always check that the kitchen is clean.
- B. Wash your hands thoroughly before starting to cook.
- C. Keep your cutting boards clean.
- D. Always wear clean clothes.
- E. Wash your hands often and each time you change tasks.
- F. Keep your nails trimmed and clean.
- G. Keep your hair from falling into the food.
- H. Do not dry sweat away with a towel used in the kitchen.
- I. Do not taste the food with your fingers.
- J. Do not taste the foods with cutlery that will be used to stir the pot.
- K. Avoid coughing, smoking or whistling when cooking.
- L. Do not breastfeed your child in or near the kitchen.
- M. Always rinse material used for cooking after using it.
- N. Keep animals and pets away from the kitchen area.
- O. Use tables and shelves when dealing with food; do not put food on the floor.
- P. Cover food so that flies cannot touch it.
- Q. If you are ill, ask your partner to cook.
- R. Never leave food directly, and for a long period in the sun.
- S. Do not eat food that smells bad.
- T. Store food in a cool place and cover well.
- U. Always store dry foods in places with good ventilation.
- V. Check the expiry date of premade products.
- W. Take off rings, bracelets and earrings before cooking to avoid small parts falling into the food.
- X. Make a rule on how long you can keep cooked food before you dispose of it (according to the temperatures over the year).
- Y. Never throw food in a dustbin without a lid or outside the house. Use a garbage or compost pit.
- Z. Add more points to the list.



*Keep water covered  
Use a ladle*



*Use a garbage pit*

### Homework

Decide on the most important changes you need make at home, to maintain a high standard of cleanliness. Explain the rules of hygiene to your children, and engage them to participate in making the changes.

# Month 8

## Healthy families

### Week 4 – Cooking demonstration

Lesson: The importance of colorful vegetables

#### Introduction

Eating plenty of green, red, yellow and white vegetables ensures that you and your family get a variety of nutrients. Each color group provides different vitamins and minerals, for example:

Green color fruits and vegetables contain vitamins, and minerals, which helps to promote strong bones and teeth, and good vision: Avocado, Chinese cabbages, green beans, spinach, pears, cucumbers, cassava leaves and cowpeas.



Red color fruits and vegetables promote heart, and urinary tract health, and improve memory and vision: Watermelons, red onions, oranges sweet potatoes and tomatoes.



Orange / yellow color fruits and vegetables contain vitamin C, which helps the heart, vision, and a healthy immune system: Oranges, papayas, butternuts, squash, carrots, sweet potatoes, yellow tomatoes, pumpkins and lemons.



Blue/purple color fruits and vegetables help to improve memory, and reduces the risk of diseases: Eggplant, blueberries and plums.



White color foods, which also includes tanned and brown fruits and vegetables, promotes a healthy heart: Bananas, cassava, kale and ginger.



Vegetables provide minerals and vitamins for our bodies; they protect us from diseases and provide soluble fiber that is needed to remove unnecessary fats, salt and agents that might cause cancer. Fibers also help to prevent constipation.

Many households go for days without consuming meat, or food containing proteins. This makes it very important to prepare vegetables in such a way that nutrients are preserved. Never prepare vegetables by adding bicarbonate of soda. It destroys most of the nutrients in vegetables. Wash and clean vegetables in clean water before cooking them. If vegetables have fungal patches, clean them with clean salty and cold water. When you boil the vegetables, some of the nutrients will leak into the cooking liquid. For this reason, it is bad to overcook vegetables.

This is also, why it is a good idea to use the cooking water in other dishes. For example, you can use this liquid instead of fresh water for making soups, or cooking other vegetables in, and in this way utilize all the valuable nutrients.

### **Instruction**

- 1) The coordinator has prepared the lesson.
- 2) List the fruits and vegetables from each of the colors you can get locally.
- 3) Read the recipes, divide into 3 groups, and prepare one recipe in each group.
- 4) Follow the instructions in the recipes.

### **More knowledge – how to cook**

#### **A. Boiled cassava – serves 4**

##### **Ingredients**

1 medium cassava  
1 cup of water  
A pinch of salt

##### **Method**

Clean and cut the cassava in small pieces.  
Put in boiling water.  
Cook until done.



#### **B. Rape with peanut butter sauce – serves 4**

##### **Ingredients**

2 to 3 tablespoons of peanut butter  
1 medium tomato  
2 cups of rape  
1 cup of moringa leaves  
1 small onion chopped  
1 cup of water and a pinch of salt  
5 tablespoons oil

##### **Method**

Fry the onion in oil until golden.  
Add tomato and cook until done.  
Mix peanut butter with water and salt, mix well.  
Add the paste to the sauce, add more water and rape.  
Simmer for 3 minutes and add moringa leaves.



#### **C. Mashed pumpkins with milk - serves 4**

##### **Ingredients**

½ pumpkin  
½ cup fresh milk  
1 teaspoon moringa powder  
Salt to taste

##### **Method**

Peel the pumpkin and scrape the inside.  
Cut into small pieces and boil until well done.  
Mash the pumpkin until smooth.  
Add milk and salt.  
Mix until smooth. Serve hot.



### **Homework**

Cook the meals for your family. Ask them to participate in getting ideas of which local vegetables, fruits and wild plants you can get from each of the colors red, blue/purple, green, white and orange/yellow.

Share your recipes with your friends and neighbors. Teach your children how to cook.

## Month 9

### Garden farming

#### Week 1 – A healthy family is a resourceful family

##### Lesson: Why Garden Farming is a smart thing to do

###### **Introduction**

The last eight months' lessons have been about health and food. Now you have a rich knowledge about health and food, and how the two are connected. All the nutritious foods your body needs can be grown locally. So growing your own nutritious food can be one answer to keeping your family healthy.

Economically, when the garden is up and running, you can expect to get a better quality and a more varied food for half the price you pay in local stores and markets. That is a worldwide rule of thumb.

The more experience you gather with gardening, the more you will get out of everything, and the cheaper it will be to produce your food.

When you have a vegetable garden, you are more in control of getting food, and getting healthy food. Droughts, pest and crop diseases have always threatened food security. Now we live in the age of global warming and a changing climate.

We already feel the consequences of this, with rain coming late, or at times when it is not expected. Crops die from lack of water, or drown in rains. Transport gets expensive. The shops have no food. Or, you have no money.

Therefore, the more food you can produce at home, the better it is for the family's health and economy. Maybe you can even sell some produce.



*Everyone in the family can participate in growing food in the garden.*

###### **Instruction**

- 1) The Coordinator introduces the lesson, and explains why Garden Farming can have a great impact in securing food during these times of climate change.
- 2) Share your own experiences with growing food.
- 3) Discuss how it could be possible for each family to have a backyard garden, or a garden farm.
- 4) Follow up on your plans for the orphans, and make a new plan for this month.

## More knowledge

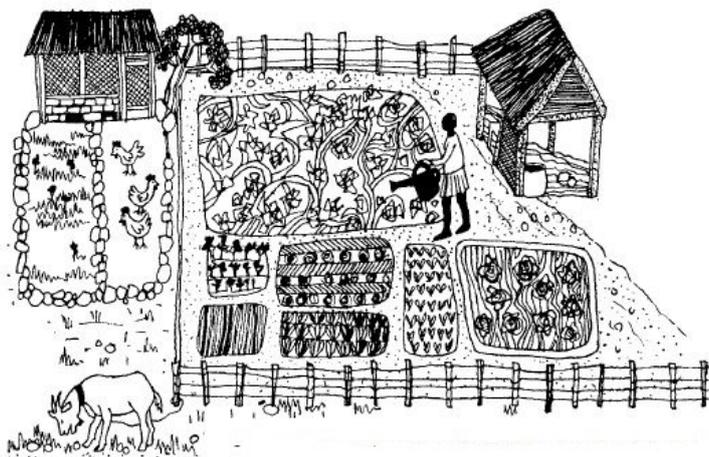
It takes some time to become a skilled gardener. This is another reason for getting started as soon as possible. There can also be many problems to overcome. That is why the Nutrition Action Group is formed, and we are here to help each other.

One reason for not getting started might be the lack of space for a garden. But there can be many solutions to that. Look at the pictures hereunder, and see how this has been solved in other places.

## Choosing the site

Vegetables need a lot of sun. Choose a sunny spot. If your garden does not get sun all day, make sure that you put the garden where there is morning sun. Trees, hedges and buildings may cast shadows on your garden, and so your plants will get less sunlight.

- The vegetable garden should be close to your house so that it is easy to look after it.
- It should be close to water.
- Choose a place with the best possible soil, but even if you have poor soil, it is easy to improve it by working in plenty of organic matter (compost and well-rotted manure).
- Once you have chosen the site, remove all grass, bushes, trees and their roots. Keep all this plant material for composting, mulching and filling trench beds.



*A lot of food can be grown in a small garden*



*Growing pumpkins on the roof*



*If you have no soil, plant in boxes or sacks*

## Homework

Tell your family about the idea of starting a backyard garden or a garden farm. Discuss where to find a good plot for the garden, and what kind of vegetables you would like to grow. Involve your children, and let them be part of the planning. Knowing how to grow food is a skill for life.

## Month 9

### Garden farming

#### Week 2 – How to solve the five most common problems of growing vegetables

Lesson: Getting started with garden farming

##### Introduction

Some of you might already have a vegetable garden, so you already understand some of the common problems, and how to solve them. Your success depends very much on your ability to find solutions, and to learn from your mistakes. One way to tackle the problems could be to befriend one of the local vegetable growers, because they seem to know all the tricks.

Today we will discuss the five main issues to solve in connection with vegetable production:

1. To have enough water.
2. To have good soil.
3. To be able to fence the garden.
4. To have good methods for controlling diseases and pests in the plants.
5. To have good methods for learning from your own mistakes.

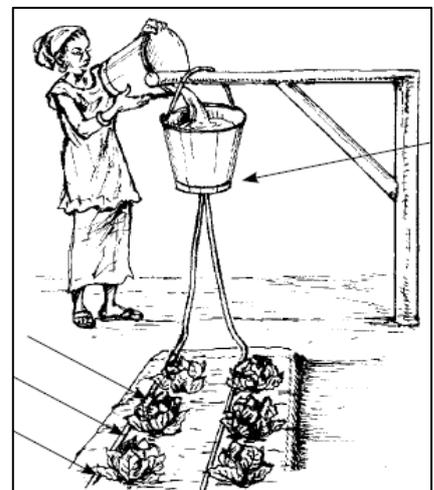
##### Instruction

- 1) The coordinator presents the lesson. She has invited a local farmer to participate, to give hands on knowledge on how to get started with the gardens.
- 2) Divide into smaller groups, and explain to each other what you have planned.
- 3) Ask questions of each other and the farmer.

##### More knowledge

###### 1. To have enough water

To have water available is the most important issue when planning where to place a vegetable garden. Water can come from a local river or canal, from a well, from rain, or from a reservoir of stored rainwater. If you can only get water from rain, it is a good idea to harvest rain for later use. This can be done by leading rainwater into an existing well, or by digging ponds to store the water. Rainwater can also be harvested from solid roofs, from where the water runs, via a pipe, into a big tank built of concrete.



*A simple drip system, where water is led directly to the roots of each plant.*

1.50 m



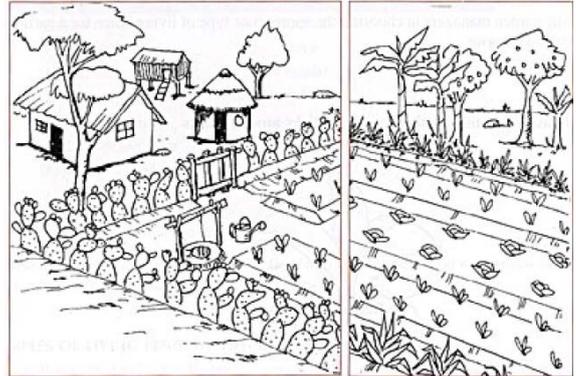
Mix compost from animal waste, plant rests, ash and kitchen waste.

## 2. To have good soil

The best vegetable soil is loam soil. Loam soil is a mix of sand, silt or clay, and organic matter. Loam soil is loose, and looks rich. Loam soil normally absorbs water and stores moisture well. Sandy and clay soil can be made into good vegetable soil, by mixing a lot of compost into the top soil.

## 3. To be able to fence the garden

To get started in a cheap way you can pile up sticky branches around the garden. If you want to have a living fence, you can plant sisal, prickly pears, jatropha or mulberry inside the fence. They will grow up with time. Or, you can make a fence of poles or wires, when you can afford it.



Fence of prickly pears – and agave

## 4. To have good methods for controlling diseases and pests in the plants



Insect pests are responsible for about 20-30 % of crop destruction. But there are many safe, natural, and simple methods of protecting plants. Planting other plants the insects do not like, is one of them. Insects can also be collected from the plants. Pick them up and drop them in a bag so they do not just return to the plants. Weeds can be avoided by covering the soil with dried grass (called mulching).

## 5. To have good methods for learning from your own mistakes

You need to make a good system for remembering everything you do in the garden, like how many seeds you have sown or plants planted, how many of them succeeded, how much water you have given and how often.....

When you know what you have done, you can improve by adding more or less, use other types of seeds or plants, plant in shade or sun, as it fits best etc.

## Homework

Continue your work with establishing the backyard garden, or garden farm at home. Consider the five issues. Ask help from local people who have gardens – you do not need to start by making mistakes that can be avoided.

## Month 9

### Garden farming

#### **Week 3 – Decide on actions to take to improve the eating habits of the families**

Lesson: Making a healthy menu that will convince my family

##### **Introduction**

By now, you have learned more about what healthy food means, and what type of food you can find locally.

So how are you doing with improving on the food your family eats?

Have you managed to explain to them why it is necessary to eat a more varied diet and to make dishes with vegetables and more different types of food than you used to eat?

Changing a habit is a big task and it cannot be done overnight. Maybe you need to plan it well and mobilize everyone in the family.

Plan it step by step, until you have reached what you wanted to change.

You also need to make sure that the food you recommend your family eats, is available and that it is prepared in a way that makes it tasty and attractive.

##### **Instruction**

- 1) The Coordinator introduces the lesson, and each of you tells about how you are doing with changing the eating habits in the family, and how far you have come with establishing a garden.
- 2) As you listen to the reports, take note of difficulties and successes.
- 3) Divide into smaller groups, and discuss how to go on with the task of changing to eating more healthy food.
- 4) In the groups, list all the different foods from the different food groups that are available locally, and share your experiences of how to get hold of it without using much more money on food. Share your experiences from growing food yourself.
- 5) Make a proposal for how to eat during a week.  
What to eat for breakfast? What to eat for lunch? What to eat for dinner?  
How to vary the menu, so you do not just eat the same every day? How to ensure that children eat well before they go to school?  
You can get help from the proposed menu attached under “More knowledge”.
- 6) Share your ideas with the whole group.



## More knowledge

### A healthy and nutritious week menu for a family

On top of the staple food like rice, maize, chima and the like, you need to eat:

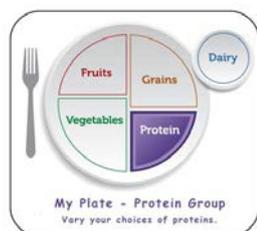
- Proteins from fish, eggs, meat, beans, nuts and milk.
- Vitamins and minerals from all kinds of vegetables and fruits.
- A small amount of fat from seeds (peanuts, pumpkin, sunflower), milk, meat or fish.
- A small amount of sugar. Not the white or brown sugar, but sugar from fruit, vegetables and the staple foods.

### An example of a healthy and nutritious week menu

	Monday	Tuesday	Wed.	Thursday	Friday	Saturday	Sunday
Breakfast	Sorghum porridge	Cowpea, mealy meal and bread	Peanut butter porridge	Boiled cassava	Boiled sweet potatoes	Sorghum porridge	Peanut butter porridge
Lunch	Cowpeas and maize	Bean soup with moringa, Mashed sweet potatoes	Moringa soup and rice with peanut butter	Bean stew with moringa, rice or chima	Grilled fish with rice or chima	Soya bean relish with rice or chima	Brown bean stew with tomatoes, rice or chima
Dinner	Nchima with okra	Moringa in peanut butter with nchima or rice	Kapenta with vegetables, and rice or nchima	Moringa sauce with rice and chima	Pumpkin leaves in peanut sauce with rice	Egg stew in tomato and onion sauce	Cabbage with tomatoes and onions

### If you have a pregnant women in your family, add some healthy snacks

Mid-morning	Any fruit of the season	Cowpeas, bread and moringa tea	Banana	1 egg and a cup of moringa tea	1 tomato, tea and sweet potatoes	Any fruit of the season	Tomato and onion salad
After-noon	Mahewu	Roasted groundnuts	Salted pumpkin seeds	Mahewu	Salted groundnuts	Round nuts and tea	Mahewu



Healthy plate



Staple food



Fruits and vegetables



Proteins



Healthy oils

## Homework

Based on the foods that are available locally, you have made a plan on how to eat healthy for every day in the week. Now you need to follow your plan. Take note of what your family likes, and what you might have to change next time you cook.

## Month 9

### Garden Farming

#### Week 4 – Cooking demonstration

##### Lesson: The benefits of moringa

##### **Introduction**

Moringa is one of the most powerful health plants. Moringa has been used to combat malnutrition, especially among infants and nursing mothers. Leaves can be eaten fresh or cooked, or dried and stored as powder for many months, without losing its nutritional value. Moringa is especially useful as a food source because the tree is in full leaf at the end of the dry season, when other foods are scarce. In moringa, we have vitamins A, B and C, calcium, iron and protein – much more than in carrots, oranges, milk or other products normally said to have high contents of these nutrients.

Moringa is an absolute super food that you need to plant in any garden. Even if you do not have space for a garden, you might have space for planting some moringa trees or a hedge of moringa cut to the height of 1 meter. You can use it in your food, but it is also an excellent animal feed. The high protein content means that chickens, goats, pigs or cattle grow better and give more meat.

##### ***Tips of using Moringa***

Be sure that you do not overcook moringa leaves, because they can become bitter or change color, and the nutrients will disappear. Cook moringa for at least 10 minutes.

You can also dry the leaves, and keep the powder for a long time when it is kept dry. You can clean the fresh leaves and eat them, or add them to any salad or cooked dish, like beans, fish or covo. You can stir them in rice and let them settle for a minute. You can make moringa tea: boil 4 cups of water, remove the water from the fire, add 1 handful of fresh moringa leaves and leave it for 4 minutes. The tea is ready.

Flowers from the moringa tree can be mixed with the leaves and used in any dish. Moringa pods can be dried and ground into a powder, which you can use in different dishes and in porridge - 1 teaspoon of moringa powder in a plate of porridge.

***Eating just half a teaspoon of moringa powder, or half a cup of fresh moringa leaves per person every day, will improve the health of your family.***



*Moringa leaves and pods*

## Instruction

- 1) The coordinator has prepared the lesson.
- 2) Discuss how you can get access to moringa. Maybe agree to plant the trees.
- 3) Read the recipes, divide into 3 groups and prepare one recipe in each group.
- 4) Follow the instructions in the recipes.

## More knowledge – how to cook

### A. Moringa sauce – serves 4

#### **Ingredients**

5 tablespoons moringa leaf powder  
¼ cup peanut butter  
1 medium onion  
1 cup water  
Salt to taste

#### **Method**

Mix peanut butter and water and bring to boil.  
Cook for 20 minutes on medium heat.  
Add moringa leaf powder and the chopped onion.  
Cover and simmer for 20 minutes.  
Serve over rice, chima or any other grain.



### B. Moringa pods with tomato and onion – serves 4

#### **Ingredients**

2 cups young moringa pods cut into small pieces  
1 onion, 1 tomato  
2 tablespoons oil  
2 cloves garlic, salt to taste

#### **Method**

Fry the onion, add the tomato and cook until done.  
Add the pods to the tomato sauce and simmer for 10 minutes or more until tender.  
Serve with rice or any starch of your choice.



*NB: Even if pods pass the stage where they snap easily they can still be used. You can boil until tender, about 15 minutes, and eat as you like.  
You can scrape the pods to remove the woody outer fiber before cooking.*

### C. Moringa soup - serves 4

#### **Ingredients**

Pieces of ginger  
2 cloves garlic  
4 cups moringa leaves  
1 tomato  
1 onion  
1 cup of mushrooms  
Salt to taste

#### **Method**

Put ginger, garlic, tomato and onion in a pot, cover with water and let it simmer for 20 minutes.  
Add moringa and mushrooms and let it simmer for some minutes.  
The soup is now ready to serve.  
You can also serve the soup over rice.



## Homework

Find out where to get moringa leaves and pods. Maybe someone has a tree they do not use. Or get hold of seeds, and make a nursery so that all of you can get some trees of your own. Tell your family about moringa and teach them to love it.

# Month 10

## Preserving and storing food

### Week 1 – Why some foods are good and some are bad

Lesson: Processed foods and sugar

#### Introduction

Warning! Most processed foods are a big threat to your health. Processed foods are premade foods you can buy from shops. It is all the soft drinks (Coca-cola, Fanta, Sprite etc...), chips, biscuits, bread, sweets, canned fish, canned beef and the like. Every food that comes in a jar, a box, a bag or a can is processed.



It is the way this food is processed, that makes it unhealthy. Chemicals are added to it, so that it can last longer without being spoiled. It is not fresh, and most of the vitamins and nutrients that were in the fresh foods have been lost in the process.

*Factory made food is bad for your health*



*Fresh fruits and vegetables are good for your health*

The sad truth is that most of the processed foods are bad for your health. The good part is that you do not need to eat it. Many of the processed foods are unhealthy snacks. You are much better off if you eat a banana or another piece of fruit, a carrot or a sweet potato instead.

To eat a balanced diet means to eat the right amount of food from the main food groups every day, so that you get the energy and the building blocks you need to build up a strong body.

#### Instruction

- 1) The project leader or the community mobilizer presents the lesson. She has also brought some examples of processed and fortified foods to illustrate how the content of the food is shown on the labels.
- 2) Work in smaller groups and discuss what types of processed foods you usually use when cooking, which of them are ok to use, and which should be exchanged for something else.
- 3) Follow up on your plans for the orphans and make a new plan for this month.

#### More knowledge

One ingredient in your diet that you need to pay special attention to is sugar. The sugars you get from the different foods you eat are good for you, and they are part of a balanced diet.

But, it is not the same with white and brown sugar.

The white and brown sugar is extracted from sugar cane, and refined by use of chemicals. When sugar is extracted and refined, it loses some of its natural elements, and becomes highly concentrated.

Natural sugar in the foods contains fibers that help your body to know when it has had enough food. Refined sugar has no fibers, and this makes it difficult for the body to feel when it has had enough. As a result, your body becomes over-fed with sugar, but you are still feeling hungry and you are missing the healthy nutrients.

Excessive consumption of sugar can be harmful to your health. Children fed with too much sugar become hyperactive, and are very difficult to handle, as their bodies continuously crave more sugar.

The contents of refined sugar is extremely high in processed foods, like soft drinks and sweets, and it can be dangerous to your health, if you consume it often and in big quantities. For example, one liter of Coca Cola has 40 cubes of sugar.

Eating too much sugar can cause many health problems, like obesity, diabetes, heart disease, and it can hinder your immune system from functioning well.

Eating a balanced diet and controlling your intake of refined sugar is two very important issues. Instead of sugar, you can use Stevia. This is a natural sugar product.



*Sugar in processed foods*

### **Good Processed Foods**

Milk is pasteurized to kill bacteria, and homogenized to keep fats from separating. Breakfast cereals are processed foods that can be good for you when they are made with 100 % whole grains, and only a little sugar. Freezing preserves most vitamins and minerals, and makes the food easy to store, cook and eat all year round. Dried fruits, roasted nuts and seeds, and 100-percent whole grain bread are also good.

Some foods have been “fortified” by adding essential vitamins, and minerals to foods that are regularly consumed by a significant proportion of the population (such as wheat flour, maize meal, salt, sugar, cooking oil and margarine). It is also good to get the benefit of these products.

### **Homework**

Use what you have discussed today to take a look at the processed foods you are buying. Involve your children in understanding the labels on the foods.



# Month 10

## Preserving and storing food

### Week 2 – Storing vegetables

Lesson: We share systems for preserving and storing vegetables

#### Introduction

The garden is a good place to keep vegetables fresh!

Many vegetables can be left in the garden and be harvested when needed.

If you plan well and have enough water, you can have plants of the same vegetables that are just sprouting, some that are about to ripen, and vegetables that have just been harvested, all at the same time.

If you grow many different types of vegetables, there is a greater chance that some of them will give yields, and the food will be more nutritious because it is varied. It is a good aim to have at least eight different types of vegetables, and to have at least one moringa tree and some fruit trees.

In order to have vegetables in store for periods with little food due to rain or heat, it is a good idea to make good storing systems and get experience in how the vegetables react to being stored. You will always need to improve your methods, and find out what went wrong when something does not work. You can find many traditions for storing food, some of which are still in use, and others that can be brought back to use.

#### Instruction

- 1) The Coordinator has prepared the lesson, and if possible, has brought examples of systems for drying and storing.
- 2) In smaller groups, share your experiences in storing food and vegetables.
- 3) Consider if you should visit local people who have good storing systems.
- 4) Agree to celebrate the end of the program after the last lesson by making an exhibition of homemade foods, snacks, oils, storing systems and preserved foods.

#### More knowledge

Let us look at some methods for processing and storing foods that might be useful.

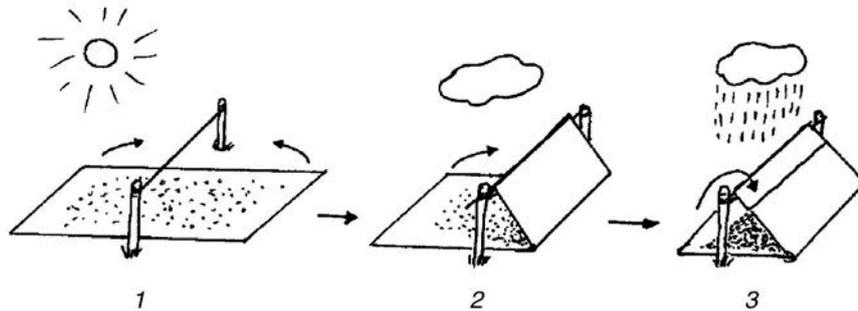
##### *Fermentation*

Fermentation makes food more nutritious, and reduces your chances of being infected with diarrhea. Fermentation is done by introducing microorganisms, which cause chemical changes in the food.

The acid produced during fermentation helps to conserve foods. Fermentation is used to make porridge, nshima (sadza) and mahewu.

### *Drying*

Many vegetables are good for drying. They should be cleaned well and cut into small pieces.



*Drying food on a plastic or canvas sheet that can be folded over a string in case of rain*

To keep the vitamins and give it a fresher look, it is good to blanch the vegetables before drying.

### *Blanching*

Boil water with salt. Put the vegetables in a clean cloth or basket.

Dip hard vegetables in boiling water for 3 minutes.

Softer vegetables, like spinach and moringa leaves, are only dipped for 2 minutes. Immediately after, dip in clean cold water.

Spread on trays, dry until they are crisp, and pack them.



*Dip in boiling water, dip in cold water, shake and dry*

### *Storing in earthenware pots and gourds*

Earthenware pots or gourds are very useful for storing small quantities of beans or seeds. By treating the pot or gourd with paint or linseed oil, and sealing the lid with mud or cow dung, the pot can be made airtight.



### **Homework**

Decide what your own contribution should be to the exhibition on the celebration day. If there is something you are really good at, choose that. Or decide to try out something new. You are welcome to seek help from people with more experience.

# Month 10

## Preserving and storing food

### Week 3 – We share methods of preserving fruits and vegetables

#### Lesson: Preservation methods

##### **Introduction**

Food preservation includes many different methods used to prevent food from spoiling. Some of them are canning, pickling, drying and smoking,

Here are some examples of preserves:

Whole tomatoes.

Tomato sauce.

Jam from tomatoes, lemon & banana or moringa & lemon.

Pickling:

Cucumbers, hot peppers, eggplants, carrots, cabbages, small onions, mangoes.



##### **Instruction**

- 1) The Coordinator presents the lesson.
- 2) If possible, a person who knows how to make pickles has been invited to make a demonstration.
- 3) Work in smaller groups and share recipes for food preservation.
- 4) Make a plan for the exhibition to celebrate your results.
- 5) Where can it be held?
- 6) Who will bring what?
- 7) Should you try to sell any home made products?
- 8) Should some guests be invited? Maybe your families and neighbors?
- 9) Discuss if the Nutrition Action Group should continue for one more year. You could also decide to split into two groups, and invite new members to join the groups. Maybe you can use the same program one more time to get to know it better.

##### **More knowledge**

There are two basic categories of pickles. The first type includes pickles preserved in vinegar, a strong acid in which few bacteria can survive. Most of the bottled kosher cucumber pickles available in the supermarket are preserved in vinegar. The other category includes pickles soaked in a salt brine to encourage fermentation, the growth of "good" bacteria that makes food less vulnerable to

being spoiled by "bad" bacteria. Common examples of fermented pickles include many cucumber dill pickles.

Pickling is not only an international food-preservation technique; it is also an ancient one. For thousands of years, our ancestors have explored ways to pickle foods, following an instinct to secure surplus food supplies for long winters, famine, and other times of need.

But pickling foods does much more than simply preserve them. It can also change their taste and texture in many interesting ways.

### How to make pumpkin pickles

- 4 cups pumpkin, peeled and cut into bite-size cubes
- 1-1/2 cups sugar
- 1-1/2 cups cider vinegar
- 2 sticks cinnamon
- 10 whole cloves

Steam pumpkin until slightly tender (do not let the pumpkin touch the boiling water or it will get mushy), about 10 minutes. Drain thoroughly and set aside.

Combine the remaining ingredients in a saucepan and

simmer, covered, for 20 minutes. Add the pumpkin, return the pan to simmering, and cook 3 more minutes, covered. Remove the pan from the heat and leave the pumpkin in the syrup; cool for 24 hours. Heat to simmering and cook 5 minutes. Remove spices and pack pumpkin into sterilized jars. Fill with syrup. Seal and process 10 minutes in boiling water.

### How to make fresh jam:

- 4.5 kg fresh mango / banana / lemon / mulberries or other fruits
- 3.5 kg of sugar

Put all the fruit and the sugar in a large pot and leave it overnight.

Next morning, stir it with a wooden spoon;

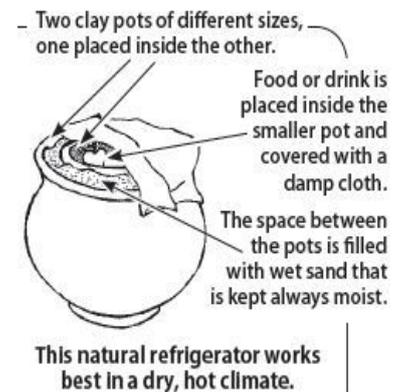
simmer on low heat while stirring constantly until it comes to the boil.

Cook until it thickens (1- 1 ½ hour).

When the jam is thick, pour it into clean glass jars. Seal and store until you want to use it.

### Homework

Decide what product to make for the exhibition and prepare it well ahead of time. Take care to prepare all the other tasks you have. Engage your family and children to participate in making this a memorable event.



*Ancient method to keep food cool*



## Month 9

### Preserving and storing food

#### Week 4 – Cooking demonstration

Lesson: How to make healthy oils and healthy snacks

##### Introduction

Fats are essential for our health, but we need to get the right kind of fats. Many people get too much of the bad fats that are harmful to health, and too little of the good fats that are needed for healthy growth, and to improve health.

Most people are using oils which add too many calories to the food. We need to reduce this and only use a small quantity. You should keep the oil at room temperature to keep the oil healthy. You can find good fats in fish, all types of nuts, avocados, sunflower seeds, beans, peanuts, maize and soybeans. Bad fats are the fats in margarine and oils for deep-frying.

We have the same problem with most snacks. They might taste good, but they are not healthy. Therefore, it is worth it to develop healthy and delicious snacks.

Protein is a great choice for a snack, because it is the building block for all our cells. It can be salted groundnuts, salted pumpkin seeds, salted sunflower seeds or any other type of nuts available. Nuts have good proteins. It is wise always to have a bag full of nuts with you. They do not spoil and they are easy to carry. Hard-boiled eggs are also good. Eggs can increase your protein intake, and they are rich in choline, a nutrient that promotes overall growth and healthy brain development. Carrots are full of Vitamin A and fibers. Sweet potatoes are a great source of vitamin C and fibers. All these are healthy for growing children and for pregnant women as well.

##### Instruction

- 1) The coordinator has prepared the lesson, and chosen 3 recipes to make.
- 2) Read the recipes, and discuss how you can make use of them at home.
- 3) Divide into 3 groups, and prepare one recipe in each group.
- 4) Follow the instructions in the recipes.

##### More knowledge – how to cook

A. Roasted peanuts – serves 4

##### Ingredients

1 cup shelled peanuts

Salt

4 tablespoons water

##### Method

Roast peanuts in a pan.

Add salt and water.

Roast dry. Enjoy as a snack.



### B. Salted pumpkin seeds – serves 4

#### **Ingredients**

1 cup shelled pumpkin seeds  
4 tablespoons water  
Salt

#### **Method**

Roast pumpkin seeds in a pan.  
Add salt and water.  
Roast dry.  
Serve as a snack.



### C. Fried bananas - serves 4

#### **Ingredients**

2 bananas  
Oil  
Salt

#### **Method**

Peel bananas and cut in slices.  
Fry the bananas in the oil until they are brown. Season with salt.



### D. Peanut oil

#### **Ingredients**

2 cups shelled peanuts

#### **Method**

Remove dirt from the nuts.  
Roast the peanuts until done - golden brown. Remove the outer skin.  
Pound them until a paste is formed, then you get the oil.



### E. Squash seed oil

#### **Ingredients**

Crushed squash seeds  
Water

#### **Method**

Toast the seeds in a pan until they are brownish.  
Crush the seeds in a mortar.  
Continue to crush the seeds to form a powder.  
Boil water and pour in the powder, continue to stir until the mixture boils. Boil for 10-20 minutes.  
Allow to cool.  
Remove the oil and place it in a clean bottle for use later.



### F. Sesame seed oil

#### **Ingredients**

Clean sesame seeds

#### **Method**

Toast the sesame seeds until golden brown. Pound to make a paste. Place in container and let stand.  
Drain the oil and store in a separate container.



### **Homework**

Try to make the snacks for your family. Make oil of the seeds that are available at your location, and enjoy being able to cook with healthy oil. Maybe you can even save some money by using less oil and producing it yourself.

**The production of this Program Manual has been assisted by use of material from the following sources:**

***FAO***

A vegetable garden for everyone  
Improving nutrition through home gardening

***Hesperian Foundation:***

A Community Guide to Environmental Health

***Humana People to People***

Food For Knowledge Newspapers 1-4

***Research Institute of Organic Agriculture FiBL***

African Organic Agriculture Training Manual

***The GAIA-Movement***

40 Green World Actions

***UNICEF***

Early learning and development

***UNICEF and DAPP Namibia***

Give every child the best start in life







## CONTACT DETAILS

DAPP Headquarters,  
11 Luneta Road, Northrise,  
P.O. Box 70505, Ndola.  
Tel +260 212 640057/59.

DAPP Partnership Office,  
4 Katima Mulilo Road, Olympia,  
P.O. Box 37661, Lusaka.  
Tel. +260 211 293604.

Email: [info@dappzambia.org](mailto:info@dappzambia.org)  
[www.dappzambia.org](http://www.dappzambia.org)



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