





FAO / European Union Food Facility Project

Promoting Improved Complementary Feeding (with recipes)



A Manual for Community Nutrition Promoters

Defeat hunger and poverty in Cambodia

May 2011

FAO EU Food Facility Project Project "Improve the Food Security of Farming Families Affected by Volatile Food Prices"

To reduce the effects of volatile food prices, the European Union provides financial support to the Food and Agriculture Organization of the United Nations (FAO) to help address the food insecurity in Cambodia. Through FAO the European Union Food Facility Project focuses on the sustainability of increased productivity, improved management practices and improved access to agricultural inputs and services and to improve dietary diversity and family feeding practices, starting with Infant and Young Child Feeding (IYCF). FAO is implementing the project in collaboration with General Directorate of Agriculture (GDA) of the Ministry of Agriculture, Forestry and Fisheries (MAFF), with cooperation from Ministry of Women's Affairs (MoWA), Ministry of Water Resources and Meteorology (MoWRAM), Fisheries Administration (FiA), relevant provincial departments and local non-government organizations (NGO)



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The nutrition messages and recipes in this Manual were developed, field-tested and refined in nine provinces (Kampong Speu, Takeo, Prey Veng, Svay Rieng, Kampong Thom, Preah Vihear, Banteay Meanchey, Siem Reap and Otdar Meanchey) by teams of officers from the Ministry of Women's Affairs, Ministry of Agriculture, Forestry and Fisheries, Ministry of Health and FAO.

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Introduction

This Manual targets all professionals engaged in the improvement of family and child nutrition in Cambodia. It is specifically tailored to the needs of community workers from agriculture, women's affairs and health and other development agents working with women, families and community groups. The aim of the Manual is to provide professionals with the basic principles of promoting good dietary practices using locally available nutritious foods that are in season, focusing on the preparation of safe and nutritious complementary foods for children 6 to 23 months of age.

The publication is divided into five main parts, covering the different types of food and their functions, with an emphasis on key nutrients; the food needs of especially vulnerable groups, such as women and young children; food safety and personal and household hygiene; recommended feeding practices and recipes for infants and young children less than two years; and finally, how to conduct nutritional counselling and cooking demonstrations.

We hope that the information in this Manual will guide community workers in helping families to improve the feeding of infants and young children and thereby contribute to reducing malnutrition and improving the health of children and families in Cambodia.

PartThe Food We Eat and Its Functions1

1.1 What is Food?

A food is something we eat that provides:

• Energy or strength for activities such as, breathing, talking, laughing, walking, running, playing, working in the field, riding a bicycle, doing housework, chopping wood, etc.



• Protein for growth and repairing body cells.



• Vitamins and minerals for protecting the body from illnesses and for staying healthy.



Healthy Happy Children

Until 6 months of age, children need breastmilk only. Breastmilk provides all the nutrients an infant needs for good growth and brain development during this period. From 6 months onwards, breastmilk alone is no longer enough. Additional foods and liquids are needed as the child grows rapidly and needs extra food and nutrients. These foods are called "complementary foods". Breastfeeding should be continued until two years of age.

1.2 Types of Food and Nutrients

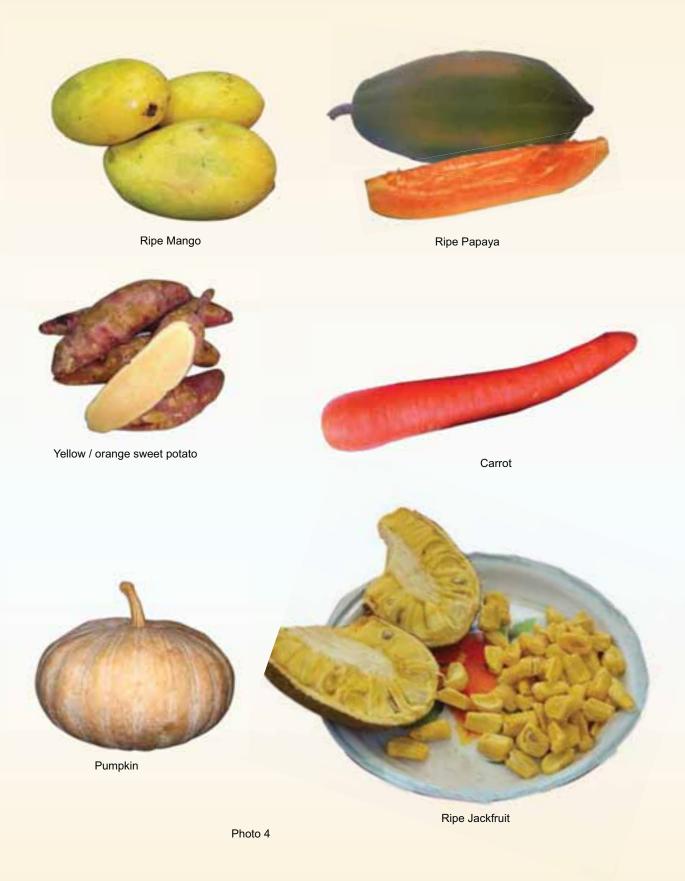
Most foods contain more than one nutrient. Almost all foods have **energy**, but some provide much more energy than others.

Staple foods (e.g. rice) form the largest part of our meal in terms of bulk or volume. They supply most of the starch (energy). Other common starchy foods are *sweet potatoes, taro, corn and cassava.* They may be used to replace rice in meals.



Rice and corn contain some protein, but sweet potatoes, wing yams and taro are poor sources of protein, and therefore need to be complemented by other foods that are good sources of protein.

Vitamin A protects the body from night blindness and other illnesses. Orange and yellow fruits and vegetables such as pumpkin, carrot, ripe papaya, ripe mango, ripe jackfruit are good sources of Vitamin A.



Dark green leafy vegetables are also good sources of Vitamin A. The vegetables shown below are consumed in Cambodia.



Morning glory



Ivy gourd



Acacia Leave(Sa Om)



Sesabania grandiflora



Pumpkin leaves



Amaranth



Star Gooseberry



Indian Spinach



Bottle gourd





Water Hyacinth Flowers

Photo 5

Most fruits provide vitamins (especially A and C) and minerals, which the body needs to keep healthy.



Local fruits consumed in Cambodia





Sapodilla







Coconut



Milk Fruit



Longan



Bananas



Rambutan

Guava

Foods of Animal Origin (e.g. fish, eggs, poultry, milk and meat) are:

- Excellent sources of protein
- They contain fat which gives the body energy
- They contain iron which promotes child growth and brain development (intelligence)
- They protect the body from illnesses, especially zinc is important for recovery from diarrhea.

Liver and **kidney** are very rich sources of iron and vitamin A. Iron and zinc are especially important for good child growth and development.



Small fish and dried fish are high in iron and zinc





Fish paste (Prahok)



Small dried fish



Salted dried fish

Photo 7

Legumes and oilseeds, such as **peanuts, mung beans and pumpkin seeds** are good sources of protein. They can be used to replace animal foods in meals.







Soya Beans





Tofu Photo 8

Peanuts, pumpkin seeds and other oilseeds also provide fat. Pumpkin seeds are also particularly rich in zinc.



Pumpkin Seeds

Sunflower Seeds

Photo 9

Fats and oils mainly provide energy. For example, one spoon of cooking oil contains twice as much energy compared to one spoon of starch or one spoon of sugar. Good sources of fats and oils are cooking oil, fatty meat, especially pork, fish, and fried foods.



Vegetable Oil



Small bag of vegetable oil



Lard

Photo 10

A little oil added to children's meals helps to make the food tasty, increases the energy content of the meal, helps to make the food soft and improves the protective function of vegetables and fruits.

Sugar and sugary foods only provide energy and no other nutrients. Adding a little sugar, but not too much, can be a useful way of increasing the energy content of a meal without increasing its volume. This is especially important in the preparation of complementary foods for young children.



White Sugar



Photo 11

Palm Sugar

1.3 How to Plan Healthy Meals

We must eat a variety of foods every day to get enough energy and nutrients for growth and repair, and to protect us from illnesses.

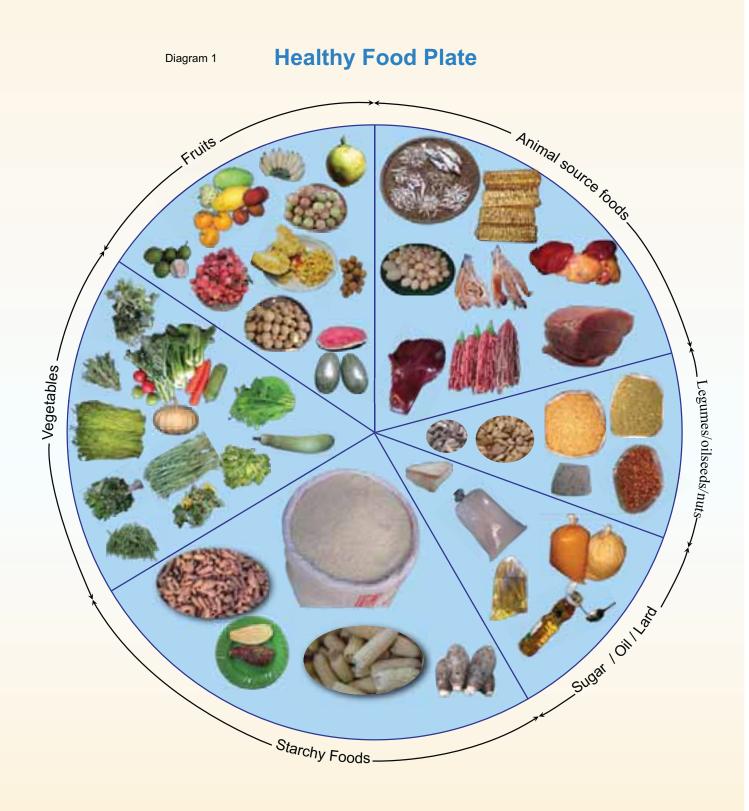
To prepare **healthy meals**, we must choose **at least one food item** from the **"minimum list of essential foods for a balanced diet**". The list includes:

- Staple foods (rice, corn for energy and protein) or tubers (sweet potatoes and taro) – [for Energy];
- Animal foods (fish, poultry and meat, especially liver/organ meats), eggs and milk [for protein, vitamin A, iron, zinc and others], i.e. at least one animal food shoud be eaten daily or if too expensive, at least 3 times a week.
- Legumes and nuts (peanuts or dried beans) [for Proteins and Energy];
- Green leafy vegetables and orange coloured vegetables and fruits [for vitamin A and vitamin C]
- A little oil is desirable [for Energy]

You can use the following combination of foods to prepare a heathy meal:

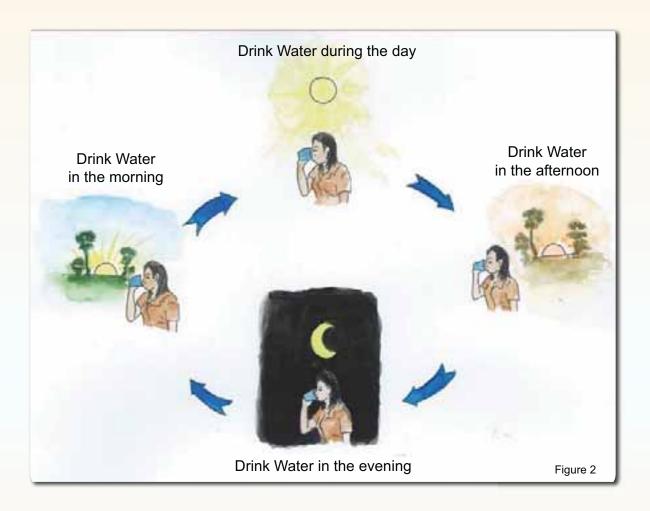
A starchy / staple food + legumes/nuts or eggs or flesh food + vegetable + a little oil

Fresh fruits eaten with or between the main meals as a snack are important to complement this mixture.



Adults and children must eat at least 3 meals and, if possible, nutritious snacks between meals, depending on their age and health status. They should also drink boiled safe water every day.

Give only boiled and safe water to children from 6 months onward. If the child seems thirsty, always feed breastmilk first before giving a little clean water.



2

Part

2.1 What Determines the Food Needs of Different Family Members?

Food needs vary, depending on:

- Age

- Children 0-6 months should get breastmilk only
- Children 6-23 months need a good mixture of foods to support rapid growth
- They need 3 main meals and one or two snacks a day, depending on age



Sex

- Women and older girls need more iron-rich foods, especially meat, than men and boys because they lose blood during menstruation
- Women need extra food, especially during pregnancy and lactation to feed the growing baby in the womb, and to produce milk during lactation



- Activity

• We use more energy when working hard in the field, chopping wood, or riding a bicycle compared to when we are seated or making baskets.



People using less energy

People using more energy

2.2 Family Members With Special Food Needs

Feeding babies (0 – 6 months): Exclusive Breastfeeding

- Initiate breastfeeding within the first hour of birth and make sure the baby is latching on properly.
- Breastmilk has all that the baby needs for the first 6 months of life. Exclusive breastfeeding reduces the risk of diarrhea and other infections.
- Breastfeed on demand, at least 8 times a day (24 hours or day and night). The more the breastfeeding frequency, the more breast milk is produced.
- Continue breastfeeding until the baby is two years
- Do not give any water or food in the first 6 months, it could make your baby sick (diarrhea).



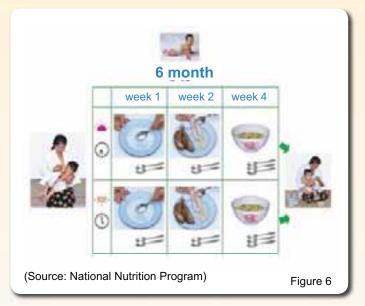
(Source: National Nutrition Program)



Feeding children (6 months):

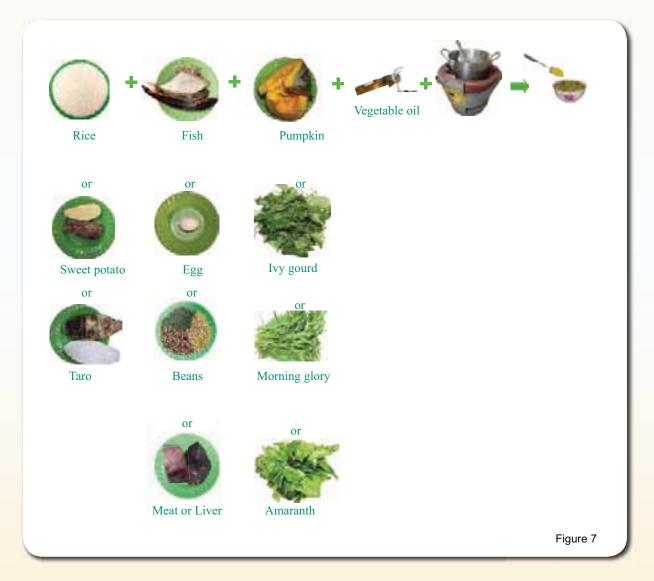
Introduce Good Complementary Foods

- From 6 months, breastmilk is no longer enough to support child growth.
- Give enriched Borbor (porridge) to the child, starting with 2-3 tablespoons twice a day.



A good complementary food or Borbor has:

A starchy / staple food + legumes/nuts or eggs or flesh food + vegetable + a little oil



Feeding children (7-8 months):

Continue giving enriched Borbor + breastfeeding

Children need three main meals of complementary foods. Try to gradually increase up to half a bowl (ie. 125 ml) per meal.

Feeding children (9-11 months):

Continue giving enriched Borbor + breastfeeding

Children need three main meals of up to nearly a full bowl (of 250 ml) per meal. Also give one snack per day. Ripe banana, papaya and mango are good snacks for children.



(Source: National Nutrition Program)

Feeding children (12-24 months): Continue giving enriched Borbor + breastfeeding

Children need three main meals of a full bowl (of 250 ml) per meal, plus two snacks per day. Ripe banana, ripe papaya and ripe mango are good snacks for children.

Pregnant Women: Eat plenty and a variety of foods

- Pregnant women need more food to support the growth of the baby in the womb
- Pregnant women should have enough rest
- During pregnancy, women are advised to take iron and deworming tablets
- Pregnant women should go for regular Antenatal Care (ANC) visits to their local health centre.



(Source: National Nutrition Program)

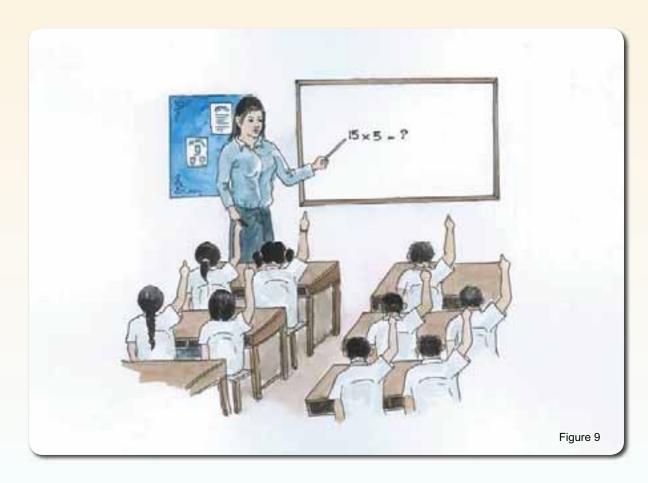
Photo 14

Lactating Women: Eat plenty and a variety of foods

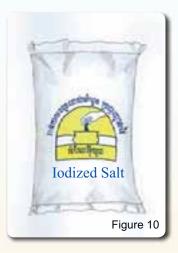
- Lactating women need more food to produce enough breast milk
- During lactation, in the first 6 weeks after delivery, mothers are advised to take a Vitamin A capsule and a deworming tablet provided by the health center or outreach team.

Type of salt to use when cooking

• Iodine is important for children's physical growth and brain development !



• Always buy and use iodized salt for cooking



A sick child needs to eat well to recover from illness quickly:

- 1. They usually have a reduced appetite.
- 2. They need to eat more food since nutrients from food are less well absorbed.
- 3. They need more water (e.g. with fever or diarrhea) because they lose more water when ill.

Consumption of adequate foods and liquids helps to reduce the risk of further infections. Please ensure that water given to a young child is always boiled and comes from a safe source.

How to help a sick child to eat enough food?

- Give small amounts of food frequently, especially when they do not want to eat. If possible feed every 1-2 hours.
- Give soft food (mashed banana, Borbor or soup) and other foods that can be easily swallowed. Encourage foods that the sick person likes to eat and try to give food that is full of energy and nutrients.
- Add a little extra fat (such as oil) or sugar to increase the energy and taste.
- Give different varieties of vegetables and fruits.
- Encourage the sick person to eat as much as they can at every meal.
- If the sick child is likely to vomit, have the child sit on your lap when feeding.



(Source: National Nutrition Program)



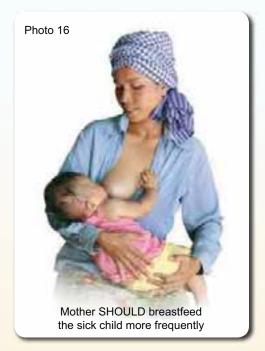


Photo 15

• Give sick people plenty to drink every 1-2 hours such as boiled water, fresh fruit juice, soup or watery porridge.



- Children 6-23 months with diarrhea or vomiting need to drink extra liquids (for example ORS – Oral Rehydration Salts) frequently.
- Increase breastfeeding if the child is sick.



(Source: National Nutrition Program)

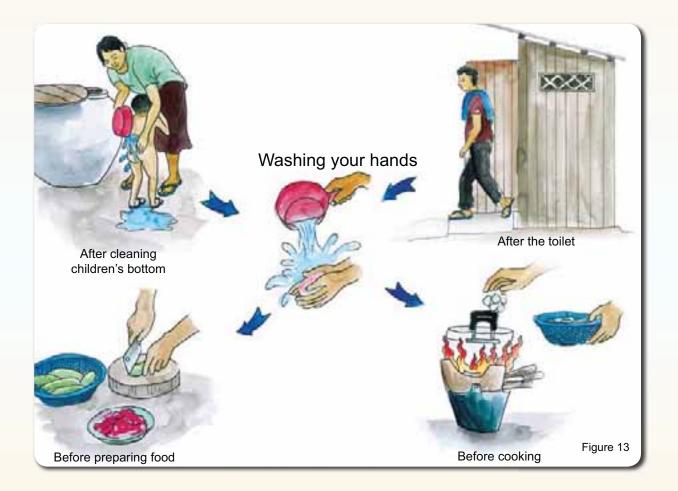
Food Safety and Hygiene

3.1 Why Must Foods and Drinks be Safe and Clean?

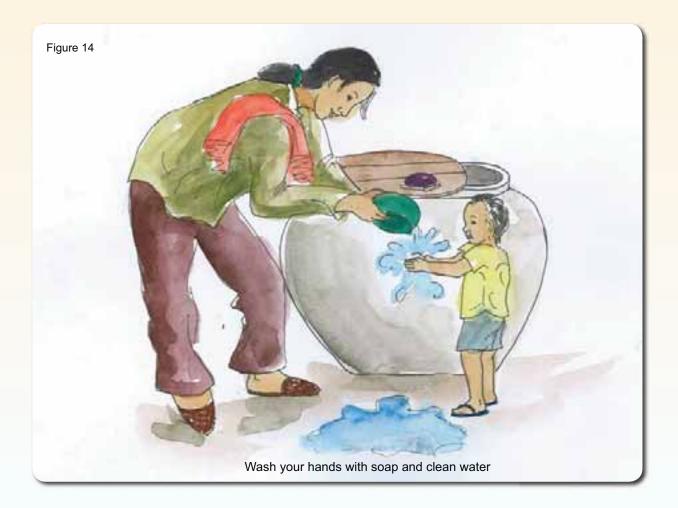
Good food and personal hygiene prevents you and your family from diseases.

Therefore:

- We wash hands with soap (or ash) after using the toilet and after washing the child's bottom.
- We also wash hands before preparing food, eating or feeding children.



• Teach children to wash their hands properly before eating and after going to the toilet.





3.2 How to Wash your Hands Correctly

Figure 15

(Source: UNICEF)



(Source: UNICEF)

Figure 16

Drinking clean and safe water

• Drink only boiled water or clean water



Keeping food safe and clean

- We get sick (e.g. vomiting and/or diarrhea) if the food we eat is no longer safe. To keep food safe and clean:
 - Cover food to protect them from insects, pests and dust
 - Use clean utensils to prepare or eat food
 - Always wash hands before handling food





Do not leave food uncovered

(Source: UNICEF)

Figure 18

23

- Store fresh food (especially fish and meat) and cooked foods separately in a cool dry place.
- Buy fresh foods (such as meat or fish) on the same day as you are going to eat them.
- Do not store leftover foods for many hours.
- Reheat foods thoroughly until hot and steaming.
- Keep dry foods such as flour or legumes in a dry, cool place and protected from insects, rats and mice and other pests.

An example of a clean storage cupboard





Many germs that make us sick come from dirty surroundings.

House with dirty surroundings

Remember! Keeping our surroundings clean can reduce the risk of getting sick.



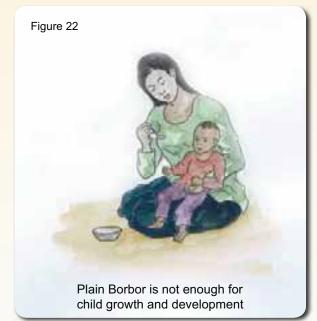
House with clean surroundings

Part

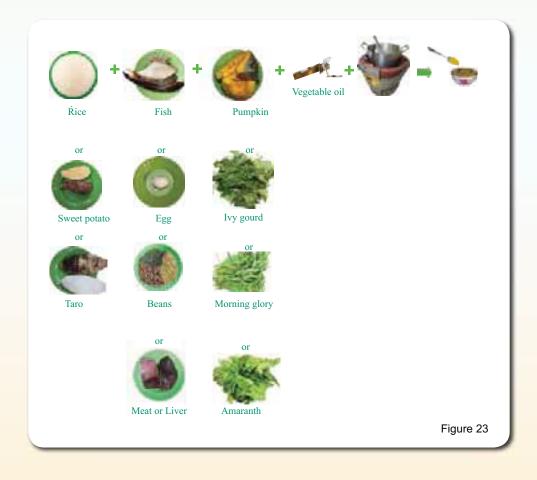
Improved Complementary Feeding Recipes

4.1 Current Complementary Feeding Practices

 From 6 months, many children only get plain Borbor, which is not enough for good child growth and brain development.



A good complementary food must contain at least the following:



- 1. Give your child a good start in life! Give him/ her enriched complementary food, prepared from foods in your household.
- 2. Give mashed ripe fruits such as papaya, banana, mango as a nutritious snack between meals.
- 3. When the child is well fed, he/she is healthy, active and alert.

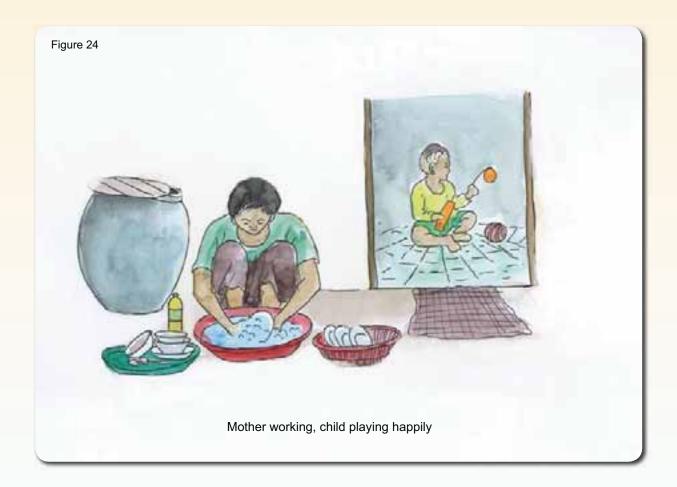




4. He/ she is happy and cries less often.



• You can do your work while your child plays happily !



4.2 Examples of Improved Complementary Feeding Dishes

- The more food items you use to prepare improved complementary food, the better the food will be.
- From the foods that you use in your home, you can make up to 10 or more healthy and nutritious meals for your child.
- The recipes suggested are very basic. You can add more variety if you can grow or purchase different foods, if affordable.
- Depending on the age of the child, go to the next page and see different ways of preparing complementary foods to give children a good start in life.

