

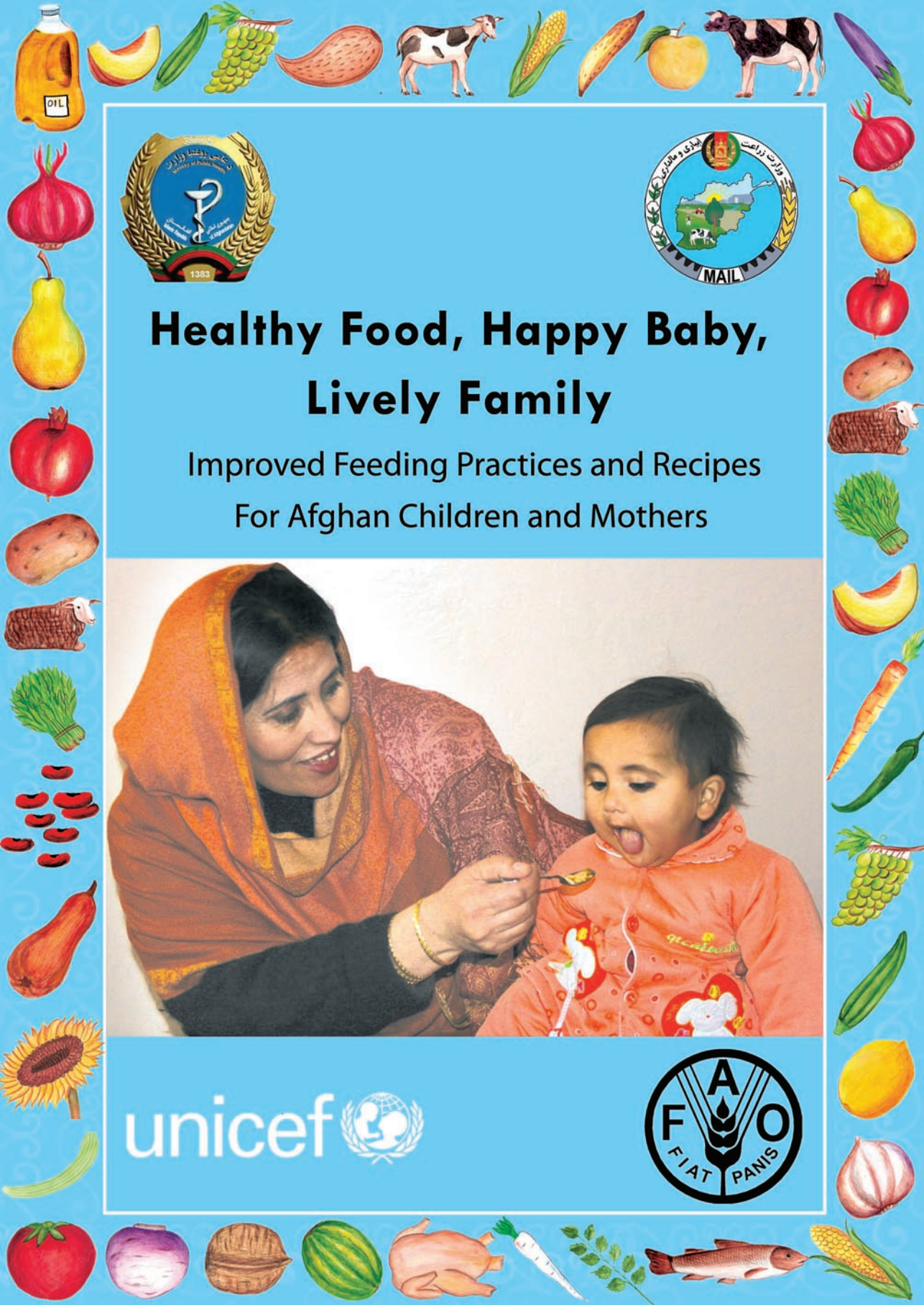


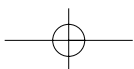
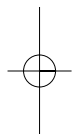
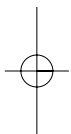
# Healthy Food, Happy Baby, Lively Family

Improved Feeding Practices and Recipes  
For Afghan Children and Mothers



unicef 







## Healthy Food, Happy Baby, Lively Family

Improved Feeding Practices and Recipes  
For Afghan Children and Mothers



Written by **Charity Dirorimwe**

Published by arrangement with the  
Food and Agriculture Organization of the United Nations  
by the  
Ministry of Agriculture, Irrigation and Livestock,  
And Ministry of Public Health  
Government of Afghanistan



The designations employed and the presentation of material in this publication do not imply the expression of any opinion whatsoever on the part of the Food and Agriculture Organization of the United Nations concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. The mention of specific companies or products of manufacturers, whether or not these have been patented, does not imply that these have been endorsed or recommended by the Food and Agriculture Organization of the United Nations in preference to others of a similar nature that are not mentioned. The views expressed herein are those of the authors and do not necessarily represent those of the Food and Agriculture Organization of the United Nations.

ISBN 978-92-5-105920-3

© FAO, 2008

## Foreword by the Ministry of Agriculture, Irrigation and Livestock and the Ministry of Public Health

Half of Afghan children under five years of age are chronically malnourished, and up to one in ten suffer from acute malnutrition. Acute malnutrition affects primarily children under two years of age: children who need breastmilk, and adequate complementary foods from the age of 6 months. Acute malnutrition can be easily prevented and often treated with good breastfeeding practices and adequate complementary foods.

The Ministry of Agriculture, Irrigation and Livestock and the Ministry of Public Health are pleased to join hands to publish this Guide on Improved Feeding Practices and Recipes for Afghan Children and Mothers. It will help home economics officers, agricultural extension workers, community health workers, literacy teachers, community mobilisers, and other professionals support Afghan families to have "Healthy Foods, Happy Babies, Lively Families".

This Guide is the third joint publication between the Ministry of Agriculture and the Ministry of Public Health, after the booklet on "Nutrition Education for Afghan Families" and the "Afghan Family Nutrition Guide". It provides practical skills on how to prepare improved recipes for children and family members that provide all the nutrients needed for growth and development.

We extend our sincere thanks to the United Nations Food and Agriculture Organization (FAO) for their technical and financial support in the preparation of this manual, and to the United Nations Children's Fund (UNICEF) for their financial contribution.

Thank you for joining us, once again, in our goal of making the Afghan nation healthy and ready to build its future.

H.E. Obaidullah Ramin  
Minister of Agriculture,  
Irrigation and Livestock



H.E. Sayed Mohammad Fatemi  
Minister of Public Health



b

## Foreword by FAO and UNICEF

FAO Afghanistan and UNICEF Afghanistan are honoured to present to you together this unique Guide for "Improved Feeding Practices and Recipes for Afghan Children and Mothers".

This Guide was developed by FAO Afghanistan and the Ministry of Agriculture Irrigation and Livestock, to specifically address Afghan families' feeding problems, with the foods that they have. It was produced with support from UNICEF and the Ministry of Public Health to complement existing nutrition education manuals developed on infant and young child feeding, in particular on breast-feeding counselling.

Agriculture provides the foods that families need to be healthy. But families also need practical guidance on how to use these foods well: good nutrition requires food, knowledge and skills.

No one can provide all these alone: good nutrition requires us to work together.

Producing this manual is only a first step; we now need you to help us bring these skills to your neighbours and fellow community members.

Thank you,

Tekeste Tekie  
Representative  
FAO Afghanistan



Catherine Mbengue  
Country Director  
UNICEF Afghanistan



## Acknowledgements

The Ministry of Agriculture, Irrigation and Livestock (MAIL) and the Ministry of Public Health (MOPH) would like to express their thanks to the persons who contributed towards the preparation of this improved feeding guide.

The Guide was written by Ms. Charity Dirorimwe, FAO Nutrition Education Consultant, who also provided overall technical support during the development of the improved recipes presented in this guide.

Recipes in this guide were developed and field-tested in four provinces by teams of officers from the MAIL and FAO.

Government officers who facilitated the community level field-testing of the recipes in Kabul, under the supervision of Nazeera Rahman, Director of Home Economics, were: Lailoma Akbari, Home Economics Officer, Amina Azizi, Home Economics Officer and Sharifa Stanakzai, Extension Officer. FAO officers who co-facilitated the field trials were Fatima Razae, Nutrition Officer in Bamyan, Nazifa Natique, Nutrition Officer in Badakshan, Seemen Sharifi, Nutrition Officer in Herat, Mahboba Abawi, Community Development Officer and Farida Lamay, Food Security Officer in Kabul. Their important contributions are gratefully acknowledged and appreciated.

The government and FAO field officers were technically supported by Charlotte Dufour, Food Security Nutrition and Livelihoods Expert, and Dr. Akbar Shahrstani, FAO Nutrition Officer during the field trials.

Ellen Muehlhoff, Senior Nutrition Education Officer and Florence Egal, Food Security, Nutrition, and Livelihoods Officer, Nutrition and Consumer Protection Division, FAO Headquarters, provided overall technical guidance during the production of this guide.

Sincere thanks go to community members in Gozara and Anjil Districts, Herat Province, Shibar and Foladi Districts, Bamyan Province, Absity and Akhbaria Districts, Badashan Province, and Se-Bangi and Chehlstoon neighbourhoods, Kabul City, who tried out the improved recipes and contributed to their refinement. Mothers and other caregivers generously shared their knowledge, experience and feelings on infant and young child feeding, including feeding of sick children and feeding of pregnant and lactating women. Without them, this improved feeding guide would not have been possible.

d

Special thanks go to the Ministry of Public Health (MOPH) Public Nutrition Department, Zenda Factory and other NGOs who made valuable contributions through their participation in workshops that evaluated outcomes of the field trials. Zenda Factory provided additional recipes that were field-tested during the summer season trials. The MOPH reviewed the technical content of the manual

Photographs were taken by Charlotte Dufour and illustrations prepared by Mr. Hassan Zakizadeh. The design and layout were prepared by Aina Media and Culture Centre publishers. Special thanks go to Mr. Nasrullah Mangal (FAO Afghanistan) for supervising the publication process.

This work would not have been possible without the support of the FAO Representative to Afghanistan, Mr. Tekeste Tekie, and without financial support of the FAO Afghanistan project funded by the Government of Germany: "Supporting Household Food Security and Nutrition in Afghanistan" and of UNICEF Afghanistan's Nutrition Department.



## Table of Contents

<b>Introduction .....</b>	<b>1</b>
Malnutrition and common feeding problems in Afghanistan .....	1
The Guide on improved feeding practices .....	4
<b>Part I: Afghan Foods, their Nutrients and Composition of Common Family Meals .....</b>	<b>7</b>
Common Afghan foods.....	7
Summary of food types and the main nutrients they provide.....	11
Seasonal and regional variation in food and nutrients availability.....	12
Composition of common Afghan meals.....	14
Importance of Eating Variety in Each Meal.....	17
<b>Part II: Special Food Needs of Young Children and Mothers.....</b>	<b>19</b>
Food needs and care of pregnant and lactating mothers.....	20
Feeding infants and small children.....	25
<b>Part III: Personal, Food and Environmental Hygiene.....</b>	<b>35</b>
Why is hygiene important?.....	35
Hand washing.....	36
Food hygiene.....	37
Keeping the surroundings clean.....	39
Managing diarrhea.....	40
<b>Part IV: Improved Recipes for Complementary Feeding.....</b>	<b>43</b>
Importance of local measures.....	43
Improved local porridges: proportion of ingredients.....	45
Suggested improved recipes for complementary feeding.....	47
Foods for feeding sick children.....	54
Developing your own recipes for complementary feeding.....	58
<b>Part V: Nutritious Family Recipes .....</b>	<b>59</b>
Principles of improved recipe development.....	59
Suggested recipes for family meals.....	60
How to develop your improved family recipes.....	66
<b>Part VI: Nutrition Counselling and Cooking Demonstrations.....</b>	<b>67</b>
Nutrition counselling.....	67
Food preparation demonstration.....	71

**Annexes**

Annex I:	Main Nutrients and their use.....	75
Annex II:	Recommended Daily allowances (RDA) of Key Nutrients for children .....	77
Annex III:	Recommended Salt Intake in Household Measures.....	81
Annex IV:	Checklist for Assessing Household Food Availability.....	83
Annex V:	Assessment and Counseling Guide .....	87

**Tables:**

Table 1:	Common Afghan foods and their main nutrients.....	11
Table 2:	Seasonal food calendar Qala-e-Mirgol Village, Gozerah District, Herat Province.....	13
Table 3:	Seasonal food calendar Deh-Shar Village, Shughnan District Badakhshan Province .....	13
Table 4:	Weight of raw foods to supply basic daily nutrients needs...	23
Table 5:	Proposed daily meals and quantities for breastfed children by age .....	30
Table 6:	Quantities of wheat, legume, milk, eggs, vegetables and oil used when preparing improved porridge .....	45
Table 7:	Energy requirements of breastfed children and the Contribution of Breast Milk and Complementary Foods by Age .....	77
Table 8:	Improved complementary food recipes: average daily intake by age and main nutrients supplied .....	78
Table 9:	Percentage of RDAs provided by complementary food recipe plus 550 ml breast milk .....	80
Table 10:	Salt intake recommended by the Food Standards Agency UK .....	81
Table 11:	Proposed daily meals by age .....	91

## Introduction

### Malnutrition and common feeding problems in Afghanistan

#### Prevalence of Malnutrition

Despite noted improvements in food availability in the past few years, food insecurity and malnutrition still remain problems for most Afghans. Children below the age of 5 years and pregnant and lactating women are the most affected.

About half of the young children in Afghanistan are small for their age or "stunted" and depending on the region, 6 to 10 per cent are too thin for their height or "wasted". It is estimated that 10 per cent of children under 5 years (10%) have vitamin A deficiency, nearly 40% are anaemic and more than 70% of children aged 7-11 years lack iodine.



Figure 1: Half of Afghan children are malnourished

Many Afghan women are malnourished. About 20% of women have vitamin A deficiency, 25% suffer from anaemia and more than 70% women of reproductive age lack iodine.



Figure 2: At least 20% of Afghan women are malnourished

Vitamin C deficiency is observed in some areas, notably in periods of drought and at the end of the winter. During the drought in 2001 and 2002, 10% of people in the northwest (Southern Faryab) and west (Herat and Ghor) were reported to be suffering from scurvy, known locally as *seeia lengi* (black legs).

## Common Feeding Problems

### Family Feeding Problems

Assessments of food consumption patterns in the different regions of Afghanistan revealed that:

- vegetable consumption is low, they are often over-cooked and the variety consumed is often limited to onion and green chillies, particularly in winter;
- fresh fruit consumption is also limited, especially in poor households and remote areas;
- meat consumption is low and is consumed mainly during festive seasons by low income households; and
- potatoes are perceived as vegetables and they are primarily used in the preparation of soups and stews that are eaten with bread or rice.

Widely consumed Afghan family meals generally lack proteins, vitamins and minerals.

### Feeding Problems of Pregnant and Lactating Women

During pregnancy and lactation, women consume a poor diet that is deficient in proteins, vitamins and minerals. In addition, they do not eat more than three meals a day because of cultural expectations. Despite women's increased food needs during this vulnerable period, they feel uncomfortable to eat an extra meal when other family members are not eating.

Poor dietary intake of women during pregnancy frequently results in malnutrition and sickness. Poor nutrition and health during pregnancy and lactation can in turn increase the risks of:

- the mother dying when giving birth;
- low birth weight of the new born baby (< 2.5 kg); and
- low breast milk production during lactation.

### Feeding Problems of Infants and Young Children

Adequate nutrition during the first 2 years of life is critical to ensure optimal physical and mental development of infants (children < 1 year) and young children. Feeding problems of infants and young children are related to breast-feeding, complementary feeding, as well as health & hygiene.

#### Common breastfeeding problems:

- Many mothers throw away colostrum and give some ritual foods at birth, such as animal fat, boiled herbs with sugar and butter (*piawae zoof*), other fluids and sometimes earth. These can be a source of contamination for the child.
- Most mothers do not breastfeed their children exclusively (breastfeeding only) for the first 6 months of life. They replace breast milk with other fluids or foods, which may not have the same beneficial nutritional properties as breast milk. As a result, children do not always get the nutrients needed for optimal growth and development, and they are at greater risk of falling sick, especially with diarrhoea.
- In the event of illness or early pregnancy, many mothers stop breastfeeding abruptly and too early (before 2 years). This practice traumatises children who do not get a chance to gradually adjust to foods other than breast milk. It greatly increases the children's risk of becoming malnourished.

#### Common complementary feeding problems:

- In most areas, there are no special foods that are given in addition to breast milk from six months onwards, i.e. complementary foods. Children are simply given bread with the liquid part of the watery soup or stew (*piyawa, qorma* or *shorba*) with very little solids. These foods fill the children's stomachs but provide inadequate energy and nutrients.
- Some mothers reported to be too busy to make special meals for small children.
- Some young children are not given a separate plate, but share the family plate. They compete with older children who eat fast and meeting their daily food needs is difficult.

#### Common problems related to hygiene and health:

- After cleaning their children's bottoms, most mothers do not wash their hands with soap. They then feed children with fingers and such children are at high risk of getting diarrhoea.
- When infants and young children get sick, especially with fever, diarrhoea or vomiting, children do not have appetite and feeding becomes difficult.

## The Guide on Improved Feeding Practices and Recipes

### Why this guide?

This Guide on Improved Feeding Practices and Recipes aims to respond to some of the feeding problems discussed above by providing guidance and nutritionally improved local recipes for feeding infants and young children, pregnant and lactating women, as well as sick children and adults.

### Recipe development

Recipes in this improved feeding guide were developed after carrying out comprehensive assessments of infants, young children and pregnant and lactating women's feeding practices in four provinces in Afghanistan, namely, Herat, Bamyan, Badakshan and Kabul.

Some recipes have been developed to meet the specific nutritional needs of children aged 6 to 24 months. Others aim at providing balanced meals for all family members, particularly children no longer receiving breastmilk and pregnant and lactating mothers. Foods used in these recipes are available in different provinces of Afghanistan. They are affordable to most households; some are grown on family farms and in home gardens and others can be purchased from the local market.

Complementary feeding recipes in this guide strive to follow the World Health Organization (WHO) Guidelines on Complementary Feeding: family foods for breastfed children (WHO, 2000). Annex I provides some of the key elements of the WHO Guidelines.

The recipes were field-tested using the Trials of Improved Practices (TIPs) method<sup>1</sup>, a research methodology that is used to test or determine the acceptability and practicability of improved recommended practices within the home set-up and within the resource capacities of households.

During the field trials, mothers, caregivers and other community members from selected communities in Herat, Bamyan, Badakshan and Kabul Provinces actively participated in the development and testing of the recipes. They generously shared their knowledge on local child and family feeding practices and participated in public food preparation demonstrations. Together with their

<sup>1</sup>The methodology used was adapted from "Designing by Dialogue: A Programme Planner's Guide to Consultative Research for Improving Young Child Feeding" by Kate Dickins and Marcia Griffiths, The Manoff Group, and Ellen Piwoz, Academy for Educational Development (1997). <http://www.globalhealthcommunication.org/tools/58>

children, they tasted the improved complementary and family dishes, provided feedback on their likes and dislikes and tried cooking them in their homes. Complementary foods and family dishes in this improved feeding guide are those that were liked best by children, mothers and or caregivers who participated in the trials.



Figure 3: Community members participating in a cooking demonstration

## Contents of the guide

This improved feeding guide is organised in 6 chapters:

Chapter 1 provides information on foods available in Afghanistan and common food practices. It gives guidance on the nutritional values of different foods and how to select foods when planning meals.

Chapter 2 describes the special nutritional requirements of pregnant and lactating mothers, and infants and young children.

Chapter 3 provides advice on how to maintain good personal, environmental and food hygiene so as to prevent diarrhoea; it also provides guidance on the management of diarrhoea.

Chapter 4 shows how to prepare good, nutritious and safe complementary foods for children aged 6 to 24 months, including the sick. It provides tested recipes and explains how to develop your own improved complementary foods.

Chapter 5 provides recipes for improved family dishes that are particularly good for children after stopping breastfeeding and for pregnant and lactating women. Improved family dishes suggested in this guide are also good for other family members. Suggestions on how to develop your own improved family recipes are also given.

Chapter 6 provides information on how to do good nutrition counselling with families, including how to conduct food preparation demonstrations.

### Intended users

The Guide on Improved Feeding Practices and Recipes for infants, young children and mothers is the first of its kind in Afghanistan. It is for everyone who genuinely cares about the feeding, nutrition and health of infants and young children and pregnant and lactating women.

It is for home economics officers, agricultural extension workers, including poultry trainers, health staff (nurse, doctor, health educator, community health workers), literacy teachers and NGO staff active in the promotion of nutrition in the health, agriculture and education sectors. Primary school teachers of higher grades may also find some of the information in this improved feeding guide useful. Mothers and caregivers who can read will also benefit from this guide.

Recipes relevant for different regions and seasons have been included. Agriculture, health workers and teachers can select the recipes that are appropriate for their region and the season and are encouraged to promote them widely. The recipes are intended to help mothers make the best food choices for variety, nutritional value and cost at different times of the year.



## Part I

# Afghan Foods, their Nutrients and Composition of Common Family Meals

## Common Afghan Foods

We need to eat diverse foods to meet all our nutrient needs. The following section describes which common Afghan foods provide us with essential nutrients.

Annex I of this improved feeding guide provides a list of the main nutrients and how the body uses them.

### Cereals and potatoes

Wheat is produced throughout the country. It is the most important cereal in the Afghan diet, followed by rice and maize. Rice is available in urban areas and some provinces, notably rice-producing provinces in the Northern and Eastern parts of Afghanistan. Maize production is lower than rice production and its utilisation is confined to certain regions, namely the Southern, Eastern, North-Eastern and Central provinces. Potatoes are produced throughout the country and after harvest, rural households bury some in the ground for use during the cold winter months.

Cereals and potatoes provide most of the energy or strength needed to work, walk, run, jump, breathe, learn and play. They also provide the energy that children need to grow up. Cereals also provide an appreciable amount of protein in the diet.



Figure 4: Food provides energy for walking, running, learning, and playing

## Legumes

Beans, mung beans, chick peas, lentils and other local legume varieties are available in most rural households shortly after harvest (August-September). Supplies go down, particularly from October onwards. In urban areas, legumes are available in markets throughout the year.

Legumes are a good source of protein and some provide minerals, especially iron, in the diet.

## Milk and milk products

Milk and milk products, i.e. fresh milk, sour skimmed milk (*dogh*), full fat yoghurt, cheese (*paneer*), dried sour skimmed milk (*krut*), cream (*chaka*) and butter (*maska*) are accessible to most households, especially in rural areas where people keep livestock. Poor households in urban areas have more restricted access to dairy products. Overall, supplies are particularly good in spring and summer and they generally go down in winter.

Milk and milk products are a good source of protein, minerals, especially calcium for strong bones, and some vitamins.

## Eggs and meat

Most households have access to eggs, but meat consumption is low, particularly for poor rural households, which consume meat 2-3 times a month. Meat is at times dried for use during winter and the dried meat is kept in dry places or under wheat flour.

Eggs and meat are a good source of dietary proteins, vitamins and minerals

Small amounts of milk and milk products, eggs, meat or any other animal food greatly improve the quality of the diet. They provide the proteins and essential vitamins and mineral, especially iron, zinc and calcium, which are vital for supporting child growth and mental development.

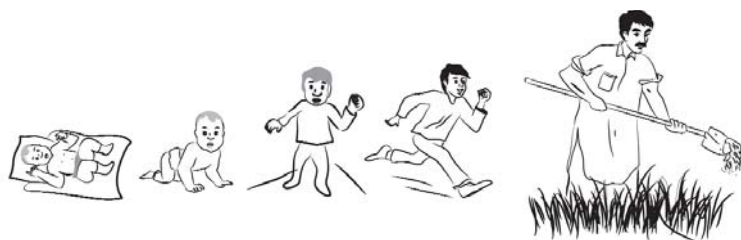


Figure 5: Diverse foods are needed to grow into strong and bright adults

## Fruits and vegetables

Many different types of fruits and vegetables are locally available; they are good to eat and essential for protection against infection. Common fruits include apples, apricots, grapes, plums, pears, peaches, cherries, melons and mulberries. These are available in summer but supplies go down in late winter in particular. Fruit conservation methods commonly used include drying, keeping grapes and pears in home-made clay pots (*kangina*) and putting apples under the straw.

Green leafy vegetables such as spinach, beetroot and turnip leaves, cabbage, coriander, leek, mint are readily available in spring, summer and autumn. However most low income rural households do not have land, or do not use small pieces of land they may have, for growing green leafy vegetables. Their access to fresh vegetables and fruits is therefore low. For this reason, many households rely on uncultivated (wild) leafy vegetables, such as *kholfa*, *shilkhai*, *shuraq*, *seech*, *arkhozak*, *gandamak* (wild leek).

Carrots, pumpkins, cauliflower, okra, aubergines, cucumber, pepper, tomatoes, radish, turnips, onion and leeks are also available in summer. Supplies of carrots, pumpkins and a few other fresh vegetables extend to the early winter season. Some households dry leafy vegetables, okra, eggplant, onion, tomato, garlic and green and red peppers and burry carrots and turnips for use during winter.

Fruits are good sources of vitamins, especially vitamins A and C, and depending on the type, vegetables provide varying amounts of vitamins and minerals in the diet as well. Most green leafy vegetables are good sources of vitamin C.

Vitamin A and C help make the body more resistant to disease. Vitamin C also helps absorb the iron contained in other foods; It is therefore good to eat fresh fruit with, or at the end of, the meal. The practice of squeezing lemon or orange juice on food is very good and should be encouraged.

Note: potatoes are commonly perceived as 'vegetables' by Afghan households because they are used like vegetables. However, potatoes are not vegetables. They are more like cereals, providing mostly energy. They provide limited vitamins and minerals.

## Nuts, oilseeds and fats

Nuts such as almonds, walnut and pistachios and oilseeds (melon seed and pumpkin seed) are generally eaten as snacks. Nuts are consumed primarily by high income households and oilseeds by households in oilseed producing areas.

Nuts, oilseeds and butter oil provide fat to the diet, which is a concentrated form of energy. For example, one spoon of butter or other forms of cooking oil contains twice as much energy compared to one spoon of sugar.

Nuts and oilseeds are also excellent sources of protein as well as some vitamins (e.g. vitamin E) and minerals (i.e. iron and zinc).

Fats and oils are very useful for increasing the energy content of meals without increasing the volume; they also help in the absorption of vitamins A, D, and E and improve the taste of meals.

### Sugar and honey

Sugar (white and brown) and honey provide energy to the diet and make foods tasty. Adding sugar is a convenient way of increasing the energy content of meals without increasing bulk.



Figure 6: Variety of foods rich in fats and oils

### Flavouring foods

Most flavouring foods (garlic, chillies, onion, etc)

do not provide many micronutrients. However, they contain important bioactive substances, and if eaten regularly, they can help prevent chronic illnesses, such as cardiovascular diseases and some cancers. They are also important as they make meals more tasty and increase appetite, thus encouraging people to eat more and helping them to get enough nutrients.

### Beverages

The most common beverages are water and green or black tea. Tea is drunk at breakfast, between meals, and after each meal.

During the winter, *dogh* (sour skimmed milk) is also drunk with meals or as a snack

Drinking tea immediately after meals reduces the absorption of iron that is in the food. Families should therefore wait for one or two hours after a meal before drinking tea.

### Summary of food types and the main nutrients they provide

Table 1 below provides a summary of common Afghan foods and the main nutrients they provide. Foods that contain carbohydrates and fats (second and fourth column) are primarily sources of energy. Foods such as sugar, honey and oils primarily provide energy to the diet. Other foods, particularly milk and milk products, some legumes and vegetables, eggs and meat provide two or more nutrients to the diet.

**Table 1: Common Afghan Foods and Their Main Nutrients**

Food Type	Main Nutrients Provided				
	Carbohydrates (Energy)	Proteins	Fats and Oil (Energy)	Vitamins	Minerals
Cereals	XXXX	XX		XX (especially whole grain)	XX (especially whole grain)
Potatoes	XXXX			X	X
Legumes	XXX	XXXX	X	X	XX
Milk and milk products	XX	XXXX	XX	XX	XXX
Eggs and meat		XXXX		XXXX	XXXX
Fruits and Vegetables				XXXX	XXX
Nuts & oilseeds		XX	XXXX		XX
Butter, oil, ghee			XXXX	X	
Sugar and honey	XXXX				

Very good source = XXXX  
 Good source = XXX  
 Fair = XX  
 Limited = X

## Seasonal and Regional Variation in Food and Nutrients Availability

### Seasonal and regional variations in food availability

Considerable seasonal and regional variations in food availability are observed throughout the country. These affect the households' ability to prepare good nutritious meals during the course of the year.

Seasonal variations are different, depending on the region. This is illustrated by the tables below: Table 2 below provides the food availability calendars for Qala-e-Mirgol Village, Gozerah District, Herat and Table 3, that of Deh-Shar Village, Shughnan District, Badakshan.

Supplies of cereals, potatoes, legumes and dairy products are good all year round in and near Herat city. Cultivated vegetable supplies go down from December to June, but the gap is filled by fruits and wild vegetables, which are available during this period.

On the contrary, legumes are only available in September-October and dairy products in April-July in the Badakshan village. Limited supplies of eggs are the only good source of protein from October to March. Furthermore, fruits and vegetables are available from July to February and there is a gap in supply from March to June.

### Effects of seasonal food availability on nutrients available

Having enough foods available from all the different food groups year round is essential for preparing nutritious balanced meals. At harvest time and shortly after (July-November) most rural communities have different foods available to prepare good nutritious meals. However, the pattern changes as reserves of some foods run out and food variety is reduced.

For example, communities in and near Herat city have a good variety of foods to make balanced meals all year round but this is not the case in the Badakshan village presented in table 3. Badakshan village households experience gaps in the availability of fruits and vegetables, and in animal products (including dairy products). This inevitably results in a diet that is deficient in some nutrients during the October-March (in particular lack of protein-rich foods, such as meat and milk) and the March-June periods (fruits and vegetables).

In consultation with local communities, extension and health workers are therefore advised to prepare seasonal food calendars that will help identify ingredients that can be used for preparing nutritious recipes at different times of the year, making the best possible use of different combinations of available food ingredients at different times of year.

Part • I Afghan Foods, Their Nutrients and Composition of Common Family Meals

Afghan Foods

**Table 2: Seasonal Food Calendar: Galae-Mirgol Village, Gozerah District, Herat Province**

Food Type	Hamal (March)	Saur (April)	Jawza (May)	Sararan (June)	Asad (July)	Sunbulah (Aug)	Mizan (Sept)	Aqrab (Oct)	Qaus (Nov)	Jadi (Dec)	Dalwa (Jan)	Hout (Feb)
Cereals												
Pulses & nuts												
Roots												
Vegetables												
Fruits												
Dairy products												
Meat/eggs/fish												
Fats												
Sugars												
Wild foods												

**Table 3: Seasonal Food Calendar: Deh-Shar Village, Shughnan District Badakhshan Province**

Food Type	Hamal (March)	Saur (April)	Jawza (May)	Sararan (June)	Asad (July)	Sunbulah (Aug)	Mizan (Sept)	Aqrab (Oct)	Qaus (Nov)	Jadi (Dec)	Dalwa (Jan)	Hout (Feb)
Cereals												
Pulses & nuts												
Roots												
Vegetables												
Fruits												
Dairy products												
Meat/eggs/fish												
Fats												
Sugars												
Wild foods												

Colour code: Red: not available; Orange: available in small quantities; Yellow: available in good quantities; Green: abundant

## Composition of Common Afghan Meals

### The main component of family meals

Afghan family meals are usually comprised of wheat bread accompanied by a soup or stew, with wheat as the main staple.

Rice is more expensive than wheat and it is commonly consumed in urban areas and certain provinces, primarily by higher income households. Two common rice dishes are *shola* and *palao*:

- *Shola* is a soft, watery, rice dish prepared with oil, onion and pepper. Families with a good income add mung beans and tomato and *shola* is eaten as a complete meal.
- *Palao* is cooked with less water than *shola* and is often prepared by households with good income. It is generally cooked with onion, oil, tomato, and is served with mutton or the *qorma* described below. The most sophisticated *palao* (*qâbli palao*) is cooked with glazed carrots, raisins, almonds, cinnamon and mutton.

*Shola* or *palao* is usually served with small quantities of bread.

In the maize producing regions, maize bread is commonly eaten with *dogh* and tea.



Figure 7: Qâbli palao, a dish for special occasions



### Accompaniments eaten with the staple

The three most common accompaniments eaten with bread are:

- *piyawa*: a watery soup prepared with onion, oil, some vegetables and often potato. Variations of this dish include egg *piyawa* and *piyawa* with dried apricots.
- *shorba*: a watery soup like *piyawa* which includes a variety of vegetables and meat.
- *qorma*: a thick soup or vegetable mash, which is less watery and contains more oil than *piyawa*. There are many types of *qorma* depending on the vegetable used (for example okra, eggplant, cauliflower), but the most common is potato *qorma*. *Qorma* is also eaten with *palao* or maize bread and families with good income add meat to it.

*Piyawa* is consumed mainly by low income rural households. *Shorba*, which is meat-based, is consumed more often by wealthier households, and 2 to 3 times per month by low income households, particularly during celebrations.

Vegetables *qorma* are commonly consumed by poor households 3 to 4 times a week and meat *qorma* by wealthier households 2 to 3 times a week.



Figure 8: Prepared *piyawa*

### Utilisation of vegetables and fruits

In addition to using vegetables during the preparation of *piyawa*, *qorma* and *shorba*, vegetables are also served raw in small quantities as salads. Fruits, both fresh and dried, are mostly served as a desert or snack.

### Utilisation of milk and milk products

Milk and milk products represent a very important part of the diet for most Afghans and for the nomads and semi-pastoralists in particular. These are often used as a drink (fresh milk and *dogh*), for breakfast and/or as a snack (e.g. bread with cream or butter) and for preparing sauces that are added to dishes such as fried eggplant and pumpkin, and dishes such as *ashak* and *mantu*

(a type of ravioli filled respectively filled with green vegetables and meat). Yoghurt is also added to *shola*, *ash* and *umach*, and white rice (see recipes in chapter 5).

### Nutritional Adequacy of Common Afghan Meals

Table 1 above gives a guide of foods that are good sources of proteins, vitamins and minerals. This table is useful for evaluating the nutritional adequacy of common family meals.

Common family meals such as bread with potato *qorma* or bread with *piyawa* and simple types of *shola* described above lack proteins, vitamins and minerals.

The diet of most rural Afghan households is therefore deficient in proteins, vitamins and minerals.

Also, while Afghan households with a good economic situation tend to use abundant amounts of fat, the poorest households often do not have access to enough fat, notably households with no animals.

## Importance of Eating Variety in Each Meal

Households are encouraged to eat a wider variety of foods in each meal, i.e., bread, rice or potatoes accompanied by a soup or stew with at least 3 to 5 different ingredients that include at least:

- one protein-rich food (i.e., legumes, milk and milk products, eggs or meat)
- two or more vitamin and mineral-rich foods (i.e., leafy vegetables, carrots, pumpkins, milk and milk products, eggs, etc.)
- a source of fat (i.e. oil, butter, yoghurt, etc.)

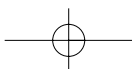
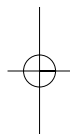
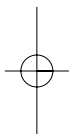
Remember that potatoes are locally perceived as vegetables but are not vegetables, as they mainly provide energy to the diet.



Figure 9: Eating foods from each food group every day makes you healthy

## Challenges to Dietary Improvement

The seasonal calendars in Tables 2 and 3 clearly show practical constraints to improving diets of communities such as the Badakshan village community (Table 3). Communities like this require additional food security interventions in addition to nutrition education before they can make significant improvements to their diet. These interventions can include kitchen gardening, introduction of greenhouses, poultry and animal health projects, and food processing activities.



## Part II Special Food Needs of Young Children and Mothers

Infants, young children and pregnant and lactating women are at greater risk of getting malnourished than other family members. Malnutrition in women is frequently the result of a poor diet during infancy, early childhood and adolescence. This is often worsened by poor food intake during the reproductive years, resulting in low birth weight babies and a continuation of the cycle of malnutrition from one generation to the next. A special effort must therefore be made to break this generation-to-generation cycle of malnutrition by doing everything possible to meeting the food needs of:

- (i) the pregnant woman and the child in her womb;
- (ii) the lactating woman and the breastfeeding infant; and
- (iii) the child aged 6 months and above, including meeting food needs during sickness.

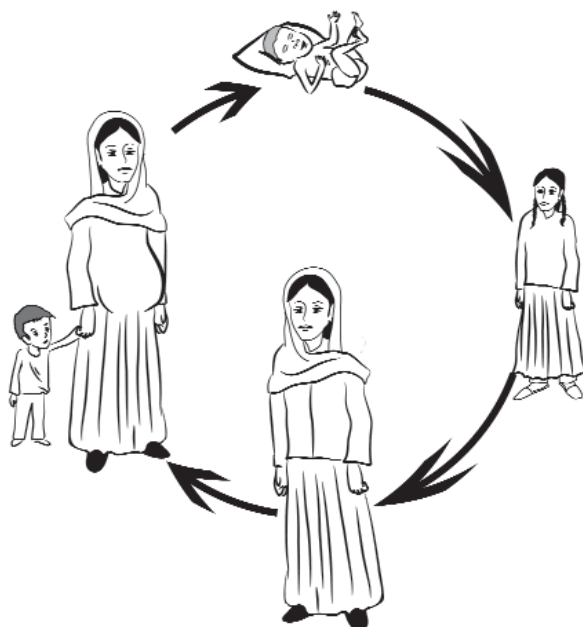


Figure 10: A malnourished mother will give birth to a malnourished child who will become a malnourished mother...

## Food Needs and Care of Pregnant and Lactating Women

### Food needs and care of pregnant women

#### Food needs

During pregnancy a woman has to provide good nutrition for two individuals: herself and the growing baby in the womb. The growing baby gets all its nourishment from its mother through the cord that attaches the baby to the mother. Therefore the diet of the future mother is very important for the development of the baby while it is still in the womb.

A pregnant woman needs **extra energy** to:

- build up her own tissues (e.g. enlarging of breasts);
- support the growth of the baby and development of the placenta that attaches the baby to the mother's womb; and
- build fat stores that will eventually be used to make breast milk after the birth of the baby.

It is particularly important that pregnant women and adolescent girls eat a good diet that supplies sufficient energy and nutrients to avoid having low birth weight babies and ensure a good supply of breast milk for the newborn.

In addition to enough energy, women need **extra protein** to build up:

- the baby's tissues; and
- her own muscles (breasts, blood supply, placenta, etc)

Low protein intake is related to smaller-than-average babies who may have health problems.

Furthermore, the pregnant woman needs **extra vitamins and minerals** to make:

- the baby's bones; and
- strong blood for both the mother and the baby.



Figure 11: A pregnant mother needs to eat diverse foods, including fruits

A pregnant woman should therefore :

- Eat a variety of foods, including plenty of the staples;
- Include fruits and vegetables in every meal;
- Include milk and milk products, beans, eggs or meat in the meal;
- Eat to the extent possible whole grain breads;
- Drink plenty of fluids;
- Eat 3 main meals and 2 snacks daily;
- Add butter or oil to increase energy density.

Nuts, oilseeds, fruits, boiled, fried, toasted maize and popcorn make excellent snacks.

Some mothers are afraid to eat more during pregnancy because they think their baby will become too big and make the delivery difficult for them. However, if the mother does not eat enough, she will become weak and face

problems during delivery. And her child will also be weak and much more vulnerable to diseases after birth.

#### Antenatal care

In addition to eating well, all pregnant women must take advantage of available antenatal care services provided in their area, in health clinics.

In particular, mothers should make sure they receive and take daily iron (5mg/day) and folic acid (60mg / day) tablets from the clinic.



Figure 12: Pregnant women receiving vitamin supplements during an antenatal session at a health centre

### Food Needs and Care of Lactating Women

#### Food needs

During the first 6 months of lactation women use a considerable amount of energy (700 kcal per day) to make breast milk.

In a well nourished lactating mother, about 1/3 of the additional energy needed to produce milk comes from the fat that she stored during pregnancy.

The other 2/3 has to come from food. In addition, the proteins, vitamins, minerals and water in breast milk have to come from the mother's diet. The additional needs continue until the child is 1 year old or more and then gradually decrease as the child takes less breast milk.

Good meals that support adequate breast milk production should consist of:

- The staple;
- Milk and milk products, legumes, eggs or meat. Small amounts of foods of animal source are vital;
- Vegetables and fruits (at least 3 different types of fruits and or vegetables a day); and
- Moderate amounts of oil to provide more energy and improve the absorption of some vitamins.

*The lactating mother should eat 3 main meals and 2 snacks daily, and she should drink a lot of fluids.*

If a breastfeeding mother is already eating balanced meals consisting of the variety of foods mentioned above, she will have to increase the quantities by approximately 25% (see figure 13) of the usual intake to meet the cost of producing milk.

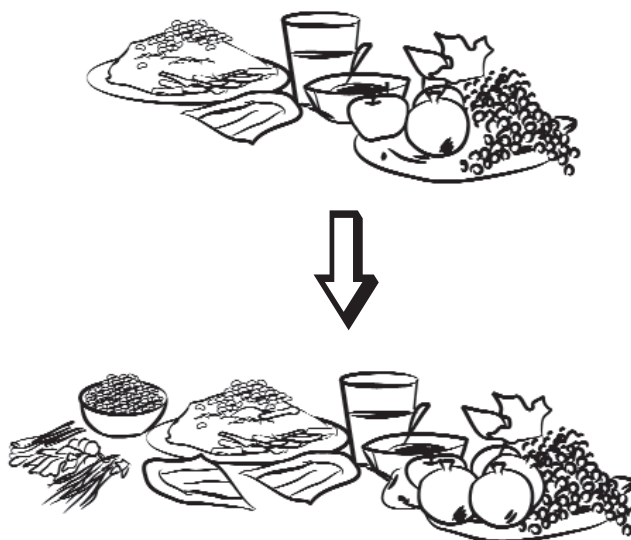


Figure 13: A breastfeeding mother should eat 25% more food than usually



**Postnatal care**

Where the services are available, lactating women must be encouraged to take advantage of available postnatal care services in their area.



Figure 14: A breastfeeding mother should attend a postnatal session at a health centre

Special Food Needs

**Summary of Food Needed by Pregnant and Lactating Women**

Table 4 below gives the quantities of food needed by pregnant and lactating women daily.

**Table 4: Weight of raw foods to supply basic daily nutrient needs**

Group	Weight (grams)				
	wheat flour	Beans*	Leafy vegetables or carrots	Oil	Fruit
Women menstruating	460g (3 cups <sup>2</sup> )	150g (¾ cup)	100g (6-9 tablespoons)	40g (8 teaspoons)	100g
Pregnant	500g (3 ⅓ cups)	150g (¾ cup)	110g (7-10 tablespoons)	40g (8 teaspoons)	120g
Lactating	560g (3 ½ cups)	200g (½ cup)	160g (12-15 tablespoons)	40g (8 teaspoons)	140g

**Source:** Adapted from the table in Improving Nutrition through Home Gardening: A Training Pack for Filed Workers in Africa, FAO, Rome, 2001, Page 32

\* The beans can be replaced with any other legume that is locally available, or 4 cups of milk for the pregnant women and 5 cups for lactating women

<sup>2</sup>1 cup = 250 ml

Given that 70% of women of reproductive age are deficient in **iodine**, the use of iodised salt should be promoted.

Many mothers are also deficient in **iron**. Iron deficiency makes mothers weak and increases the risk of babies being weak. In addition to taking iron and folic acid supplements during pregnancy, pregnant and lactating mothers should be encouraged to eat iron-rich foods, such as:

- red meat
- liver and offal
- legumes, such as lentils
- spinach and some other dark green leaves

When eating these foods, it is recommended to eat vitamin C rich foods, such as oranges, lemons, rhubarb, and fresh vegetables, because they increase the amount of iron absorbed by the body.

Mothers should also be encouraged to wait 1 to 2 hours between their meal and drinking tea, because tea prevents the body from using the iron that is in the food.

At each of the 3 main meals, pregnant and lactating women in this state should eat a little extra of everything, i.e.,:

- an extra tablespoon or two of potatoes, rice and or an additional piece of bread;
- a little more of beans, milk or milk products; and
- additional fruits and vegetables.

## Feeding infants and small children

Infants and small children grow very fast and they are physically active. They therefore need a good combination of foods to support growth and development.

If children are well fed, they will be happier and are likely to cry less. They will not be sick often and mothers will have more time for household chores and other important duties.

### Successful breastfeeding

Breast milk is the best food for babies from birth up to the age of 6 months. It is clean and safe, protects the child from diseases, contains the energy and nutrients that the child needs to grow and develop and it is ready to drink. Mothers should be encouraged to breastfeed for 2 years and beyond.



Figure 15: Holding and positioning the baby correctly helps the baby to breastfeed

The following hints help mothers to avoid breastfeeding problems and ensure that they produce enough milk.

### Relaxation

It is very important for the mother to be comfortable and relaxed to stimulate the milk ejection reflex (letdown).

### First contact with and positioning of baby

Advise the mother to hold the baby in close skin-to-skin contact shortly after the baby is born and start breastfeeding as soon as the baby shows readiness to suckle.

Correct positioning is key to successful breastfeeding. It enables the baby to latch-on correctly, suck effectively and prevents sore nipples:

- The mother should bring the baby to the breast and not the breast to the baby.
- The baby should be supported by placing the mother's hand behind the baby's neck and shoulders.
- The baby should be able to latch-on to the breast without having to stretch or twist.

When the mother brings the baby close to the breast, she directs her nipple to touch the baby's lower lip and quickly pulls the baby in to latch on as soon as the baby opens the mouth wide. The nipple should be directed to point at the roof of the baby's mouth (soft palate). When properly attached:

- the baby's chin should touch the breast;
- the mouth should have a "mouthful of breast" and the lower lip should be turned outward; and
- the mother should have no pain.

Breastfeeding should not hurt but a little nipple tenderness is normal during the early days. Soreness, bleeding or cracked nipples are not normal and the mother should seek the advice of a health worker.

#### **Breastfeeding in the first 3 days and exclusive breastfeeding**

Advise mothers to give the thick, yellowish fluid (colostrums) from the breast because it is highly protective against infections and provides all the nutrients a baby needs.

Mothers' milk contains enough nutrients and enough water up to the age of 6 months, hence mothers should not give any other foods until the child is 6 months. Even in summer, infants under 6 months do not require water.

#### **Emptying both breasts during breastfeeding**

Advise the mother to breastfeed the baby on demand during the day and at night without restricting the feeding time. She can breastfeed the baby lying down, while her hand supports the child's head and shoulders in an elevated position. The child should be fed from one breast until it is empty and then shift to the second breast once the first breast is empty. At the next feed, the mother should alternate and start with the other breast.

#### **Knowing whether the baby is getting enough milk**

Many mothers are afraid of "not having enough milk". Some of the signs that indicate whether the baby is getting enough milk are:

- One or two wet cloth napkins (diapers) during the first few days, while the baby is receiving colostrums.
- Six to eight wet napkins per day (24 hours) on the third or fourth day of lactation.
- At least 2-5 bowel movements every 24 hours for the first several months.
- The baby feeding frequently averaging 8-12 feedings per day.
- Baby's swallowing sounds audible during breastfeeding.

The baby should be alert and active, appear healthy, have good colour and firm skin.

#### What to do if a mother does not have enough breastmilk

Many Afghan mothers complain that they do not have sufficient breastmilk. This is the cause of many cases of acute malnutrition amongst infants. Common causes of insufficient breastmilk are:

- the mother has stopped breastfeeding because she is ill or has become pregnant and believes her milk is 'haram' (forbidden by the Koran), although this is not true.
- The mother is depressed or has some mental health problems which affects her relationship with the baby and her capacity to breastfeed.



Figure 16: A breastfed baby is a happy baby

It is very important for mothers to know that, according to the Koran, breastmilk is never 'haram'. The Koran encourages mothers to breastfeed until 2 years of age for boys, and 2 years and 2 months for girls.

The mother should also know that it is possible to make her breastmilk 'come back' and increase her breastmilk. She can try the following:

- putting the child to her breast in the correct position and encouraging the child to suckle as often as possible. The more often a child suckles, the more breastmilk the mother will produce
- making the child suckle from both breasts
- increasing her fluid and food intake

If the mother is not succeeding she may seek the guidance of a health worker trained on breastfeeding counselling. If she has some mental health problems, she may seek the support of family, friends and health workers.

## Complementary feeding

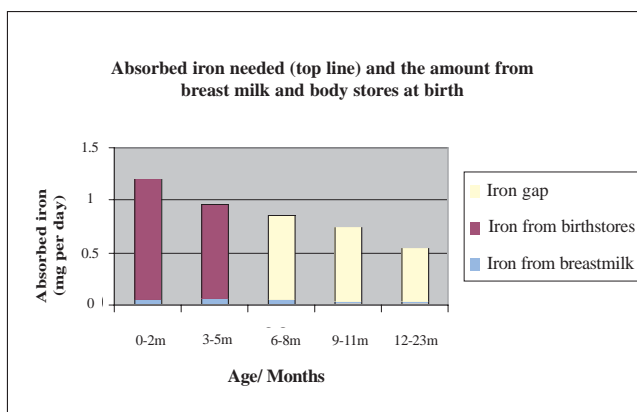
### What is complementary feeding?

Complementary feeding means giving other foods in addition to breast milk.

From the age of 6 months onwards, breast milk starts to be insufficient and the child requires complementary foods, i.e., foods in addition to breast milk. The mother should therefore continue breastfeeding, while giving the child foods such as porridge, cow milk and yoghurt, mashed fruits, fruit juices and finely chopped or shredded green leafy vegetables. Ingredients for making sauces that accompany main family dishes, e.g. beans, chickpeas, lentils, mung beans, milk and milk products, eggs, meat, carrots, pumpkins, leafy vegetables, cooking oil, etc., are excellent for enriching the children's porridge.

#### Iron content of complementary foods

Children receive little iron from breastmilk. Full term babies are born with enough iron stores (if mothers were well nourished during pregnancy), which are used up by the age of 6 months. Children's iron needs are greatest between 6 and 12 months and iron-rich complementary foods (with spinach, lentils, meat, etc) are therefore vital from 6 months onwards to close the gap between the iron from breastmilk and the children's needs.



**Source:** Adapted from WHO (2000) Guidelines on Complementary Feeding: Family Foods for Breastfed Children.

Pre-term and low-birth-weight babies are at increased risk of anaemia because they are born with smaller body stores of iron, so the iron gap is even greater. Giving such children fresh fruits rich in vitamin C improves iron absorption.

*Energy content of complementary foods*

Fats and oils, for example milk fat and vegetable oil are a very concentrated form of energy useful for increasing the energy content of infants and young children's meals without increasing the volume or size of the meals. This is important because children have small stomachs and can eat only small amounts of food at each meal.

Children above 6 months must be fed regularly (3 to 5 times a day). This ensures that children get sufficient energy, proteins, vitamins and minerals for growth, development and protection from infections.

**Introducing complementary foods**

The mother should give the child one new food at a time, starting with small quantities and gradually increasing the quantity over a 3 to 5-day period. As the child gets accustomed to eating a particular food, the mother can add the next new food into the child's diet, starting with small quantities and gradually increasing them.



Figure 17: Improved porridge

When introducing improved porridge to children at 6 months, the mother should start with 2-3 tablespoonfuls of a soft porridge per feed. She should feed the child 2 times a day in addition to breastfeeding on demand.

The quantity of porridge gradually increases to about  $\frac{1}{2}$  cup<sup>3</sup> per feed and the number of meals increase from 2 to 3 meals a day as the child gets accustomed to eating the porridge.

At 9-11 months, the quantity of porridge increases to between  $\frac{3}{4}$  - 1 cup per feed and the porridge gets thicker.

Table 5 below provides details of the number of complementary feeding meals per day and the quantities to give per meal by age.

<sup>3</sup>A 250 ml cup

**Table 5: Proposed Daily Meals and Quantities for Breastfed Children by Age**

Age Group of Child	Daily Meals of Complementary Food	Quantity of Flour for One Meal	Quantity of Cooked Food per Serving	Comment
6-8 Months	2-3	1-1 ½ tablespoons * (heaped)	Start with 2-3 tablespoonfuls and gradually increase to ½ to ¾ of cup	Start with fairly thick porridge and gradually increase thickness
9-11 Months	3	2-2¼ tablespoons (heaped)	1¾ to 1cup	Thicker consistency
12-24 Months	3 meals plus 2 snacks between main meals	3-4½ tablespoons (heaped)	to 1 ¼ cups	Thicker consistency

**NB:**

- \* 1 table spoonful of flour is 10 grams.
- \* 3 table spoonfuls of flour are equal to 1/3 cup
- \* A baby who is not being breastfed for whatever reason should be given an additional 2 meals a day of the complementary food.

Table 5 is adapted from WHO, 2006. Infant and Young Child Feeding Counselling: An Integrated Course. Trainer's Guide, p. 417.

Special Food Needs



### How to feed children

In addition to the above, mothers should be encouraged to:

- feed children under the age of 12 months directly and assist older children to feed themselves;
- feed young children with the rest of the family but give them their own plates and spoons to make sure they get and eat their share;
- give foods that children can hold if they want to feed themselves and tell them not to worry about messy eating - but make sure that the child finishes the food;
- feed the child patiently and encourage him to eat without forcing or hurrying him;
- experiment with different food combinations, tastes and textures if the child refuses certain foods; mix foods well if the child picks out and eats only favourite foods;
- minimize distractions during meals if the child loses interest easily;
- make mealtimes happy times, a period of learning and love-talk (e.g. tell child how good the food is), and maintain an eye to eye contact with the child;
- make sure the child is not thirsty because thirsty children eat less; but do not fill up the child's stomach with too much drink before or during the meal;
- feed children as soon as they are hungry without waiting for them to start crying for food; do not feed them when they are tired or sleepy.

### Feeding fussy children

Sometimes even healthy children are fussy eaters. The mother should ensure that the child is not sick or unhappy and:

- give more attention and praise when the child eats well and less attention when the child is trying to gain attention by refusing food;
- play games to persuade a reluctant child to eat more; and
- avoid force-feeding because this increases stress and decreases appetite even more.

### Getting the children accustomed to foods from the family pot

At 8 or 9 months of age, encourage the mother to gradually give the baby soft or mashed foods from the main family pot. Always follow the basic rules of gradually introducing a new dish to the child's diet and making sure that the child gets a mixture of foods to provide energy, protein, vitamins and minerals from the family pot.

### Useful hints

Encourage mothers to reduce their workload by bulk processing ingredients for making complementary foods, that is, processing quantities that will feed the child for up to 2 weeks. Premix the ingredients where convenient and store them in a clean safe container.

Depending on the age of the child and the recommended daily meal frequency of complementary feeds, 1-1 ½ heaped tablespoons flour can be used to prepare a meal for a 7-months-old child for instance and 3-4½ tablespoons for a child aged 12-23 months. Table 5 above provides the details.



Figure 18: You can process ingredients in bulk to save time

### Feeding the sick child

Eating well helps to fight infections. Therefore the mother must make sure that the child eats well

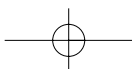
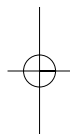
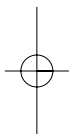
during illnesses. Furthermore, additional food and water are needed to replace the food and water lost during diarrhoea and vomiting. The food also helps the gut to recover.

When a child is ill, especially with fever, diarrhoea, or vomiting he may not feel like eating because infections often reduce appetite. Infections also increase the need for certain nutrients that are poorly absorbed by the gut and the body uses nutrients faster than usual when repairing the body's defence system. Most mothers and caregivers find it very challenging to feed sick children without appetite, particularly those with diarrhoea and vomiting and some end up withholding food. However, mothers are advised to:

- give the sick child small quantities of food frequently (every 1-2 hours) and encourage the child to eat more at each meal;
- give the child soft foods and easy-to-eat foods which the child likes, but these should include energy-rich and nutrient-rich foods, e.g.:
  - porridges enriched with milk or eggs, etc.;
  - mashed fruits;
  - mashed boiled egg with lemon;
  - rice soup or soft rice with yoghurt and mint, which are easy to swallow.

- add extra fat or fatty foods and/or sweet foods, such as sugar or honey, where appropriate;
- give the child plenty to drink (boiled and cooled water, fresh fruit juice, soup or watery porridges) every 1-2 hours; and
- prepare foods and drinks in a clean, safe way to prevent food-borne infections.

During recovery, the child will often get hungrier than usual and can eat more food and quickly regain the lost weight. If still breastfeeding, the mother should breastfeed the child more often. She can express the milk and feed it from a small cup or spoon if the child is too ill to suckle. The child must be fed with small amounts of food more frequently.



## Part III Personal, Food and Environmental Hygiene

### Why is hygiene important?

#### Simple hygiene rules

Household members must be encouraged to observe basic personal, food and environmental hygiene at all times. This helps to reduce the possibility of children getting sick, particularly with diarrhoea. Basic hygiene issues to observe in every household include:

- proper hand washing,
- thoroughly washing cooking utensils,
- covering or protecting food from pests and
- keeping the surroundings of the home clean.

#### How People Get Diarrhoea

Flies and cockroaches help to spread germs. House flies multiply in dirty surroundings, particularly on animal droppings, human waste, rotten things and in poorly constructed latrines, especially in summer. Cockroaches particularly thrive on cooked food left uncovered.

When these flies and cockroaches walk over ready-to-eat food, they leave dirt, which may not be seen. Touching ready-to-eat food without washing hands also leaves dirt/germs on the food. These germs and dirt cause diarrhoea once the food is eaten. All household members, particularly mothers, are encouraged to do everything possible to reduce the children's risk of getting diarrhoea. This will help to reduce the challenges and frustrations of treating and feeding sick children.

## Hand Washing

The mother should:

- Always wash her hands with soap (or ashes) and water, before food preparation and before feeding the child.
- Make sure that the children's hands are washed with soap and water immediately before and after feeding.
- Train other family members (helpers) to wash their hands with soap before preparing, serving and eating food, and after using the latrine/toilet.
- Dry hands by shaking and rubbing them together.
- Keep finger nails short and clean.

Mothers are encouraged to wash their and their children's hands under running water as shown below.



Mother being helped to wash hands



Washing hands without help:  
washing the first hand



Washing hands without help:  
washing the second hand



Mother washing her child's hands

Figure 19: Different ways to wash your and your child's hands effectively

## Food Hygiene

### Hygiene in the kitchen

The mother should:

- Store food and water in covered containers to protect it from dust and pests which carry germs
- Use clean utensils to prepare and serve food
- Use fresh and wholesome food
- Cover any wounds on hands to prevent contaminating food during its preparation
- Cover cooked food to stop flies from getting onto it
- Serve the food shortly after preparation
- Thoroughly reheat already prepared (left-over) food up to boiling point if the mother is too busy to prepare food for each feed
- Train all family members to avoid coughing or spitting near food or water

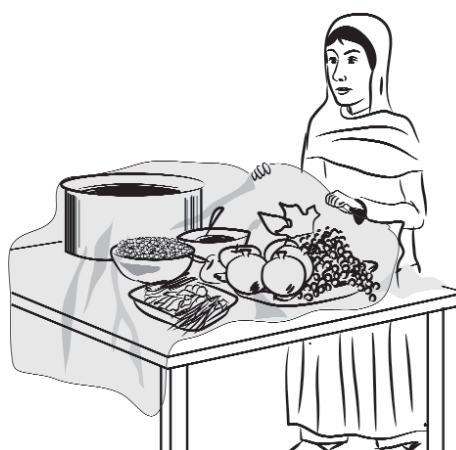


Figure 20: Cover food to protect it from flies and other pests

### Feeding the Child

- The child must be fed with a clean spoon
- If the mother has to use her fingers to feed the child, she must wash her hands as described above
- The mother should wash the child's hands before feeding
- The mother should make sure that the child does not play with or touch dirt while feeding.

## Safe Drinking Water

The household should:

- Protect its drinking water supply. If the water is coming from the well, the area around the well must be raised to prevent dirty water from flowing into the well. Cover the well opening.
- Use clean containers to collect water; and
- Boil drinking water and store it in a clean covered container, if the water is coming from a public unprotected well, river or pond.

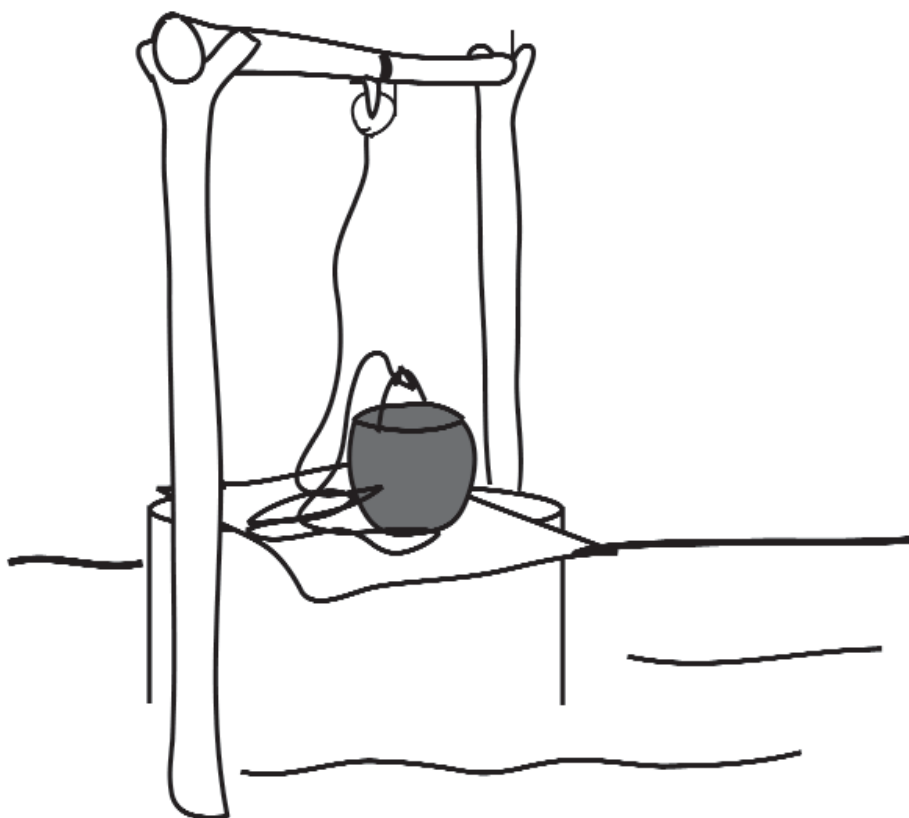


Figure 21: a protected well provides safe water



## Keeping the Surroundings Clean

To reduce the number of flies and cockroaches around the home, families must strive to:

- Clean up the area around the home to keep away flies, mosquitoes and germs which cause illness;
- Construct a latrine, use it and keep it clean;
- Clean up animal faeces from the surroundings; and
- Make compost for the garden with any suitable waste (food waste, animal faeces, etc.)

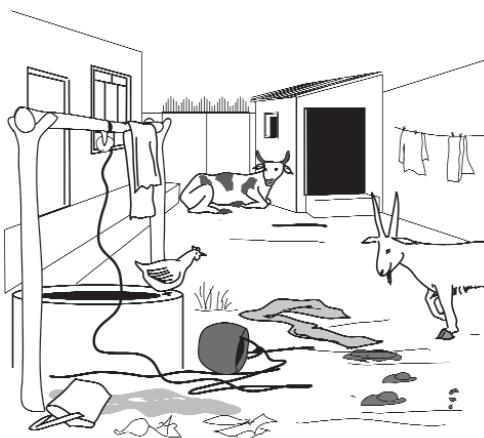
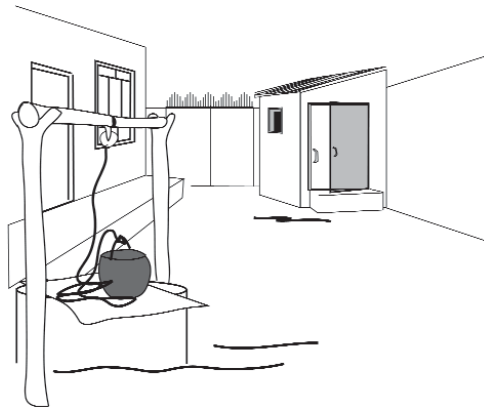


Figure 22: Which home is healthier for your children?

## Managing Diarrhoea

If the child gets diarrhoea, advise the mother (caregiver) to:

- Continue feeding the child and continue breastfeeding if the child is still breastfeeding; and
- Prepare the salt and sugar solution and give it to the child. This helps to replace the water the child is losing through diarrhoea and prevents dehydration.

### Preparing salt and sugar solution

Resources for making a 1 litre salt-sugar solution

- 4 glasses of water (equivalent to 1 L)
- One sachet of ORS or 1 level teaspoon of salt with 8 level teaspoons sugar

#### Procedure

- Boil and cool the water
- Fill a one-litre container with the boiled water (about 4 glasses of water),
- Add 1 sachet of ORS, or 1 level teaspoon salt and 8 level teaspoons sugar
- mix well with a clean spoon

The solution should be consumed within 24 hours.

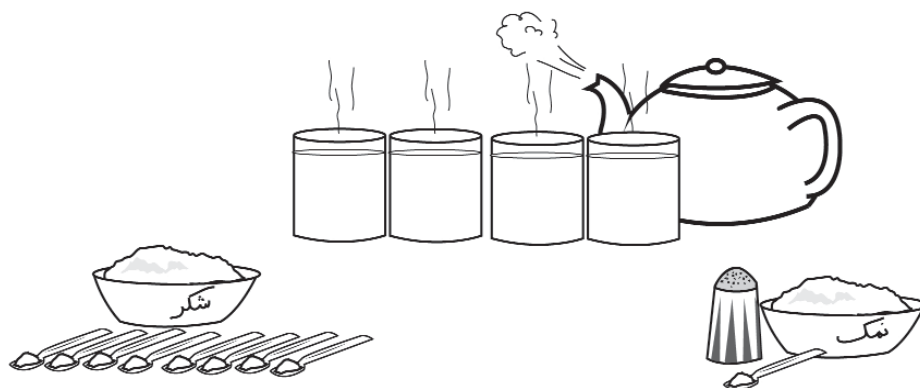


Figure 23: Ingredients needed to make salt and sugar solution

### Giving salt and sugar solution to a person with diarrhoea

The mother should:

- Give as many small sips of the solution to a small child (about half a cup or more of the solution each time he passes stool).
- If the child is vomiting as well, give him a few sips and wait for 5 to 10 minutes and give a few more until the child has taken in about half a cup of the solution.
- Keep the remaining solution in a clean covered container, in a cool place and use it when necessary.
- Prepare a fresh mixture of the salt and sugar solution each day and it is best to use up the solution during the course of that day.

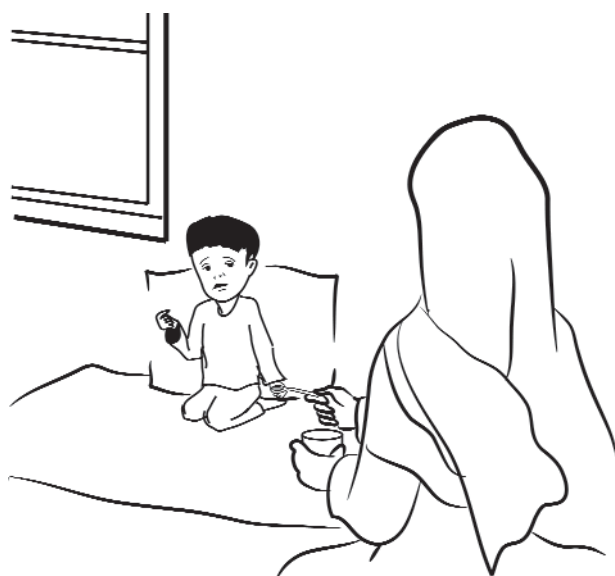
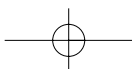
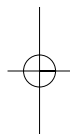
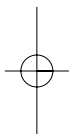


Figure 24: Feed your sick child small quantities of ORS with a spoon

Should a big child or adult get diarrhoea, they make the same solution and drink as much of the salt and sugar solution as they can.

### Action to take if diarrhoea persists

If the diarrhoea is severe and continues for a day or mild and continues for 3 days, advise the mother to take the child to the nearest health centre.



## Part IV Improved Complementary Feeding Recipes

### Importance of Local Measures

#### What are local measures?

Local measures are cups, spoons, bowls, tins and any other containers (utensils) or ways of measuring food, commonly used in the area or homes when purchasing, preparing and eating food.

#### Why use local measures?

They are useful tools which mothers can use when preparing family meals and complementary foods to ensure that they prepare adequate meals.

Local measures used in this guide are cups, tablespoons, teaspoons and a two-finger pinch. Sizes of cups vary from area to area and the 250 ml cup is being used in this guide.

The mother may opt to use a tablespoon or a cup to measure cooking ingredients, depending on whether she is:

- preparing food for one child for one feed;
- preparing food for more than one child; or
- bulk-preparing the wheat and bean flour mixture.

The key is to use the right proportions of the main ingredients as explained in the section below.

**Weight or volume equivalent of household measures for various ingredients:**

- 4 two-finger pinches of salt = an eighth of a teaspoon = 1 gram
- 1 of the common glass tea cups (full to the brim) = 250 ml = 17 tablespoons
- 250 ml cup = 120 gm of wheat = 180 gm of beans
- 1 heaped teaspoon of sugar = 5 grams sugar



Figure 25: Common household measures and utensils

## Improved Local Porridges: Proportion of ingredients

Traditional wheat porridge recipes were improved by adding legume flour (bean, chickpea, lentil or mung bean), milk or eggs to the porridge.

Table 6 provides quantities of wheat and beans flours to use.

The proportion of wheat: beans is 2:1. that is:

The quantities of vegetables, oil and other bean substitutes (milk and eggs) are indicated in table 6.

2 tablespoon of wheat for 1 tablespoon beans  
OR  
1 tablespoon of wheat for ½ tablespoon beans

**Table 6: Quantities of Wheat, Legume, Milk, Eggs, Vegetables and Oil to Use When Preparing Improved Porridge**

Household Measure	Main ingredient (Wheat Flour)	Improvements			
		Protein-rich Food (choose 1 of the 3)	Pounded Vegetables	Oil	Remarks
Tablespoon (for 1 feed)	1 tablespoon	a) bean flour = ½ table-spoon	1 teaspoon	1 teaspoon	Bean flour can be replaced with chickpeas, lentils or mung beans
		b) Milk = ¼ cup	1 teaspoon	1 teaspoon	Fresh or sour milk can be used, depending on local preferences
		c) Eggs = 1	1 teaspoon	1 teaspoon	1 egg is approximately 65 grams
Cup (for more than one child)	1 cup	a) bean flour = ½ cup	2 ½ table-spoons	2 ½ table-spoons	
		b) Milk = 3 cup	2 ½ table-spoons	2 ½ table-spoons	
		c) Eggs = 1	2 ½ table-spoons	2 ½ table-spoons	

\* 1 cup = 250 ml

\* 1 tablespoon = 15 ml

**NB:** A bigger household measure should be used if the mother or caregiver is processing the wheat and bean flour mixture in bulk for later use

### Salt and sugar

Complementary foods were also improved by reducing the usual salt content to a two-finger pinch of salt per feed and not more than 4 two-finger pinches of salt per day.

Depending on the region, some dishes in this guide are preferred with:

- sugar only;
- salt only; or
- a mixture of a little sugar and little salt.

You have to find out the local preferences and work within these to increase acceptance of the improved dishes. However the salt content must be within the limits indicated above: a two-finger pinch of salt/feed and less than 4 two-finger pinches/day.

Annex III gives recommended salt intake (by the Food Standards Agency, UK) in household measures for children and adults.



Figure 26: Mother pounding vegetables



Figure 27: Two-finger pinch of salt



## Suggested Improved Recipes for Complementary Feeding

Improved recipes for complementary in this guide are:

- Wheat with beans/chick peas porridge
- Wheat with milk porridge
- Wheat with egg porridge
- Potatoes with milk mash
- Potatoes with beans mash
- Potatoes with egg mash
- *Firni*
- Milky rice (*shir berenj*)

**Note:** Maize flour can replace wheat flour in maize eating regions

Pounded vegetable options include: spinach, coriander, turnip and beetroot leaves, leek, wild leafy vegetables (e.g. *kholf*), dried leafy vegetables as well as mashed cooked carrots. This provides a much wider range of alternatives to promote.

Note: The availability of green leafy vegetables may be a real challenge during the late winter season, a time when supplies of both fresh and dried vegetables are low. Extension and home economics workers must therefore advise households to store and preserve (for example dry) more vegetables when supplies are good (in summer) for use during the winter months.

Depending on the season and the local food availability calendar, you select and promote recipes that are relevant to your region and season. We encourage you to develop additional recipes using the guidelines provided after the recipes below.

In addition to the proposed complementary foods below, advise mothers to give snacks such as yoghurt, apricots and ground pumpkin seed. Also encourage the use of whole grain flour and, when available, giving mashed liver to children. These are excellent for improving the children's zinc and iron intake.

## Wheat with Milk Porridge

### Ingredients:

- 1 tablespoon wheat flour
- $\frac{1}{4}$  cup<sup>4</sup> milk
- $\frac{1}{2}$  cup water
- 1 teaspoon oil
- 1 teaspoon pounded leafy vegetables<sup>5</sup> or mashed carrots
- 1 teaspoon sugar
- iodised salt to taste (preferably one light 2-finger pinch of salt)

- a) Mix wheat flour with milk
- b) Add water, mix and put it on fire to cook (10-15 minutes)
- c) Add oil and sugar
- d) Add pounded vegetables and cook for 2-3 minutes
- e) Add iodised salt



Figure 28: Wheat with milk porridge

## Wheat with Beans Porridge

### Ingredients:

- 1 tablespoon wheat flour
- $\frac{1}{2}$  tablespoon bean flour
- 1 teaspoon oil
- $1\frac{1}{2}$  cups water
- 1 teaspoon pounded leafy vegetables or mashed carrots
- 1 teaspoon sugar
- iodised salt to taste (preferably one light 2-finger pinch of salt)

<sup>4</sup>1 cup = 250 ml

<sup>5</sup>Spinach or any other locally available leafy vegetables, including indigenous leafy vegetables

- a) Put the 1 cup of water and bean flour into the pot, mix well, bring to boil and simmer for 20 minutes
- b) Using the remaining water (1/2 cup), make a paste of wheat flour and add it to the beans mixture in the pot
- c) Mix well and cook the mixture for 10 minutes
- d) Add oil and sugar
- e) Add pounded vegetables and cook for 2-3 minutes
- f) Add iodised salt



Figure 29: Wheat with beans porridge

### Wheat with Egg Porridge

#### Ingredients:

- 1 tablespoon wheat flour
- 1 egg
- 1 teaspoon oil
- 3/4 cup water
- 1 teaspoon pounded leafy vegetables or mashed carrots
- 1 teaspoon sugar (optional)
- iodised salt to taste (preferably one light 2-finger pinch of salt)

- a) Put the water into a pot and add the wheat flour, mix well, bring to boil and simmer for 5 minutes
- b) Add the egg, oil and sugar (optional) and cook for 2-3 minutes
- c) Add the pounded vegetables and cook for 2-3 minutes
- d) Add iodised salt



Figure 30: Wheat with egg porridge

### Potato and Milk Mash

**Ingredients:**

- 1 Medium size potato (about 100 grams or ½ cup of chopped pieces of potatoes)
- ¼ cup milk
- ½ cup water
- 1 teaspoon oil
- 1 teaspoon pounded leafy vegetables or mashed carrots
- Iodised salt to taste (preferably one light 2-finger pinch of salt)

- a) Peel potato, cut it into small pieces and cook in water until soft and the water is almost finished.
- b) Mash potato pieces
- c) Add milk and mix well
- d) Cook for 3-5 minutes and add oil
- e) Add the pounded vegetables and cook for 2-3 minutes
- f) Add iodised salt



Figure 31: Potato and milk mash

### Potato and Egg Mash

**Ingredients:**

- 1 Medium size potato (about 100 grams or ½ cup of chopped pieces of potatoes)
- 1 egg
- ½- ¾ cup water
- 1 teaspoon oil
- 1 teaspoon pounded leafy vegetables or mashed carrots
- Iodised Salt to taste (preferably one light 2-finger pinch of salt)

- a) Peel potato, cut it into small pieces and cook in  $\frac{1}{2}$  cup of water until soft and the water is almost finished.
- b) Mash potato pieces
- c) Add the egg and the remaining  $\frac{1}{4}$  cup of water and mix well
- d) Cook for 3-5 minutes and add oil
- e) Add the pounded vegetables and cook for 2-3 minutes
- f) Add iodised salt



Figure 32 Potato and egg mash

### Potato and Bean Mash

#### Ingredients:

- 1 Medium size potato (about 100 grams or  $\frac{1}{2}$  cup of chopped pieces of potatoes)
- $\frac{1}{2}$  tablespoon bean flour
- 1 teaspoon oil
- 1 -  $1\frac{1}{4}$  cups water
- 1 teaspoon pounded leafy vegetables or mashed carrots
- Iodised salt to taste (preferably one light 2-finger pinch of salt)



Figure 33: Potato and bean mash

- a) Peel potato, cut it into small pieces
- b) Put the  $\frac{1}{2}$  cup of water and bean flour into a pot, mix well, bring to boil
- c) Add the remaining water and the potato pieces and cook for 20 minutes and the potato pieces, if small enough will be cooked by then
- d) Add oil and pounded vegetables and cook for 2-3 minutes
- e) Add iodised salt

### Firni

#### Ingredients

- 1 cup milk
- 2 tablespoon of rice or rice flour or *noshohesta*
- 2 tablespoon of sugar
- 2 three grains of cardamom
- 1 teaspoon chopped pistachios or nuts (if available)
- 1 teaspoon of chopped fruit, such as banana, apple, or raisin

- a) Mix the flour, sugar and cardamom in the milk and boil it for 5 minutes
- b) Serve in flat plate and sprinkle the pistachio and fruits on the dish; leave to become cold



Figure 34: Firni

### Milky rice (*Shir Berenj*) - for about 3 people

#### Ingredients

- ½ cup of rice
- 1 liter of milk
- ½ cup of sugar
- 1 teaspoon oil
- 4 grains of cardamom
- 1 tablespoon of finely chopped fruit, such as apple
- 1 teaspoon chopped walnut (optional)

- a) Put the milk to boil
- b) Wash the rice and put it in the milk
- c) Add sugar and cardamom
- d) Leave to cook for 30 minutes on low heat
- e) Take off the heat; add the chopped fruit and / or nut. Leave to cool and serve.



Figure 35: Shir berenj

**Other version of *shir berenj*** - for about 3 people

- 1/2 cup rice
- 1 cup water
- 4 tablespoons sugar
- 2 cups milk
- 1 tablespoon of finely chopped fruit, such as apple
- 1 teaspoon chopped walnut (optional)

- a) Cook rice in pressure cooker for 10 minutes
- b) Boil the milk separately with the sugar
- c) Add the cooked rice to the milk and cook it for 3 minutes
- d) Take off the heat; add the chopped fruit and / or nut. Leave to cool and serve.

## Foods for feeding sick children

This section provides guidance and recipes for children with:

- Diarrhoea;
- Common colds;
- Nausea and vomiting

**Important note:** When a breastfeeding child becomes sick, the mother should continue breastfeeding. Breastmilk helps the child fight illness and the close contact with the mother makes the child feel secure.

### For diarrhoea

- Eat soft, mashed, moist foods like porridge from wheat and rice, enriched with milk and soft vegetable like squash, pumpkins or carrots.
- Eat refined foods like, white bread, potatoes, white rice and noodles.
- Drink plenty of fluids

Examples of good recipes are:

- White rice (*berenj safed*)
- Boiled egg (as a snack)
- Boiled potato with mint
- Rice soup (*shorba berenj*)

### White rice (*Berenj safed*) - for 3 people

1 cup rice  
 3 cups water  
 1 pinch iodised salt  
 2 cups of yoghurt or according to taste and desired texture  
 1 teaspoon dry mint or dried *pudina*

- Wash rice.
- Cook in pressure cooker for 10 mins
- Add dry mint and serve with yoghurt.



Figure 36: *Berenj safed*



### Boiled egg (as a snack)

1 Egg  
1 Lemon

- a) Boil the egg until it is cooked (about 10 minutes)
- b) Leave it to cool and shell
- c) Mash it, add lemon juice and serve



Figure 37: Boiled egg with lemon

### Boiled potato with mint

1 medium size potato  
1 tablespoon of mint or *pudina*  
 $\frac{1}{2}$  cup yogurt

Preparation method:

- a) Boil the potato,
- b) Mash it well.
- c) Add mint and yoghurt and serve



Figure 38: Boiled potato with mint

## Rice Soup (*Shorba berenj*)

### Ingredients:

2 tablespoons rice

½ cup water

½ cup milk

2 teaspoons of mashed carrots or pumpkin and/or green leafy vegetables

Salt to taste

- a) Put the rice, milk and water in the pot and cook
- b) Cover the pot and cook until soft.
- c) Options: add grated/mashed carrots, pumpkin.



**Note:** this recipe is also good for coping with lack of appetite, nausea /vomiting, and colds.

Figure 39: *Shorba berenj*

### For cold

Examples for dishes that are good for colds are:

- *umach* (Badakshani recipe)
- *shola tarkari* (vegetable rice)
- *shorba tarkari* (vegetable soup)
- and *ash tarkari* (vegetable spaghetti)

The recipe for *umach* is provided below.

The recipes for *shola tarkari*, *shorba tarkari* and *ash tarkari* are provided in Part 5, Nutritious Family Recipes.

**Umach (from Badakshan)** for 6 people

- 1 cup wheat flour
- 10 ½ cups water
- 1 tablespoon iodised salt to taste
- 2 turnips
- 3 or 4 carrots
- 2 tomatoes
- 100g coriander or *pudina* or other wild vegetables
- 1 cup yogurt

Figure 40: *Umach*

- a) Mix the flour with ½ cup water and rub it to turn in very small balls,
- b) Boil 10 cups of water and add the vegetables (chopped) and coriander or wild vegetables
- c) Add the wheat balls into the water and cook for 20 minutes (in normal pot)
- d) Serve with yoghurt

**For Nausea and Vomiting**

If vomiting, drink small amounts of fluids like water and soups. Eat soft foods and return to solid foods when the vomiting stops.

If nauseous, the following can be tried:

- Drinking green tea, prepared with mint (dry or fresh) and lemon peel (boiled for 10 to 15 minutes)
- Drinking green tea with ginger, brown sugar and chopped walnuts (walnuts are optional)
- Eating dry mint leaves with salt
- Smelling a fresh orange or lemon peel
- Chewing dried krut

## Developing Your Own Recipes for Complementary Feeding

### Nutrition composition of recipes

The agriculture or health worker must ensure that foods rich in energy (carbohydrates and butter, oil or oilseeds), protein, vitamins and minerals are included in the recipe. Table 1 in Part I of this guide provides information on the foods that are good sources of carbohydrates, proteins, vitamins, minerals and fats.

The proportion of the 'cereal to legumes' must be 2 to 1. Table 6 (on page 45) above provides details of other ingredients to add and possible options.

Given the high rate of iodine deficiency among children, **iodised salt should be added** within the recommended limits (one two-finger pinch of salt per feed).

### Quantity of vegetables

The bigger the child, the more vegetable he needs.  
The guiding principle is: use the child's fistful of vegetables (the quantity is proportional to the child size).

This translates into 1-2 teaspoons of cooked pounded vegetables per meal or 3-5 teaspoons of pounded vegetables a day.

**NB:** 1 heaped teaspoon **pounded** vegetables = 5-6 grams = 3 heaped teaspoons of **shredded** vegetables

### Quantity of oil

Depending on ingredients used and the child's age, 1 to 2 teaspoons of oil per meal are needed.

On average, 35-45% of energy of the complementary food must come from oil or fat/butter.

## Part V

# Nutritious Family Recipes

## Principles of improved recipe development

### Getting the best value when feeding the family

When preparing family meals, the caregiver has to take into account foods that are readily available because these are relatively cheap. Extension and health workers are therefore urged to promote consumption of a variety of nutritious foods that are relatively cheap and relevant to their region.

### Guiding nutrition principle used in recipe development

As was the case with complementary feeding recipes, the guiding principle used in developing improved family feeding recipes was to ensure inclusion of the following foods in each recipe:

- Carbohydrate-rich foods;
- Protein-rich foods;
- Vitamin and mineral-rich foods; and
- Oil.

Where the recipe does not necessarily contain a carbohydrate-rich ingredient, the dish will be served with bread.

The improved family feeding recipes given below are good for pregnant and lactating women. Pregnant and lactating women get a little extra than usual (an additional tablespoon or two of rice or stew, etc) when serving these foods. This is essential if they are to meet their own food needs and those of the growing baby.

These recipes are also good for older weaned off children. Advise mothers to give a good mixture of these cooked foods to older weaned off children, and not primarily the liquid part of the dish. Such children should be given 3 main meals plus 2 snacks each day.

## Suggested recipes for family meals

### Pumpkin and egg mix (*Qorma kadu*) - for 6 people

#### Ingredients

A small pumpkin (1kg)  
2 tablespoons oil  
2 eggs  
1 medium size onion  
2 medium size tomatoes  
1 glass of water  
Iodised salt to taste

- a) Peel the onion, tomatoes and pumpkin and cut into small pieces
- b) Put the oil into the pot, add the onion and fry until the onion is light brown
- c) Add the tomatoes and then the pumpkin
- d) Add water and salt and cook for 5 minutes
- e) Beat the egg and add it to the cooked pumpkin
- f) Cook for 2-3 minutes until the egg is well cooked

Serve with one loaf of bread



Figure 41: Qorma kadu with egg

### Pumpkin and chickpeas mix (*Qorma kadu*) - for 6 people

#### Ingredients

Small pumpkin (1kg)  
½ cup chickpeas (100 g)  
5 tablespoons oil  
2 medium size onions  
2 medium size tomatoes  
Iodised salt to taste  
1 cup water



Figure 42: Qorma kadu with chickpeas

- a) Soak the chickpeas in hot water for 2-3 hours
- b) Put oil in a pressure cooker and fry the onion until light brown
- c) Add chopped tomatoes and cook until the tomato water is dried
- d) Add pumpkin and the chickpeas in pressure cooker and cook for 15 minutes

Serve with one loaf of bread

### Cabbage Qorma (Qorma Karam) - for 7 people

#### Ingredients

- 1 kg of small cabbage
- 2 cups of water
- 2 medium size onions (200 gm)
- 2 medium size tomatoes
- 7 tablespoons oil
- 1 cup peas (*dál nakhot*)
- Iodised salt to taste
- 1 cup yogurt

- a) Soak the peas for a few hours. Drain them, and cook them in water for about 25 minutes in a normal pot or 10 minutes in a pressure cooker
- b) Put oil into a separate pot and add the onions
- c) Fry the onion until slightly brown
- d) Add tomatoes and cabbage and cook it for 10 minutes
- e) Add the cooked peas and cook for 5 minutes
- f) Put yogurt and serve

Serve with one loaf of bread



Figure 43: Qorma karam

**Eggplant and cheese (*Banjan Krut*)** - for a family dish of 5 people**Ingredients**

5 medium eggplants (1 kg)  
 4 medium potatoes (½ kg)  
 2 large tomatoes (250 gm)  
 10 tablespoons oil (200 gm)  
 4 cloves of garlic (50 gm) (2 for dish, 2 for krut)  
 2 medium size onions (200 gm)  
 2 cups *krut*, cream (*chaka*) or yogurt (½ kg)  
 ½ cup water  
 Iodised salt to taste

- a) Fry the onion until light brown
- b) Add chopped tomatoes and garlic
- c) Add potatoes, egg plants and ½ glass of water and cook for 20 minutes
- d) Take off from the heat and add the *krut*, *chaka* or yoghurt and serve

Serve with one loaf of bread



Figure 44: *Banjan krut*

**Vegetable spaghetti (*ash tarkari*)** - for 7 people**Ingredients**

Around 250g spinach (two big fistfuls) or leek  
 400 gm spaghetti  
 5 medium turnips  
 5 cloves of garlic  
 2 big onions  
 2 medium size tomatoes or tomato paste  
 Iodised salt to taste  
 2 big potatoes



Figure 45: *Ash tarkari*



½ cup chickpeas  
 ½ cup beans  
 (or 1 cup of either chickpeas, beans or lentils)  
 2 tablespoons oil  
 2 cups of cream or 3 cups of yoghurt  
 2 liters water

- a) Boil the beans and chickpeas with 3 cups of water in a pressure cooker for 20 minutes
- b) Cut the vegetables and turnip
- c) Put the oil in a clean pot and fry the onion until light brown; add tomatoes or tomato sauce
- d) Add water, boiled beans, chickpeas, spaghetti, , turnip and onions and boil for 20 minutes
- e) Add salt and cook on low heat for 5 minutes
- f) Add cream or yoghurt and serve the food.

Bread is optional

### Rice and beans mix (*Kechery Krut*) - for 7 people

#### Ingredients

3 cups rice  
 7 cups water  
 1 cup mungbeans  
 1 to 2 tablespoons cooking oil  
 2 cups krut (liquid)  
 Iodised salt to taste  
 1 Onion (100gms)  
 1 tomato (100gm)  
 4 cloves of garlic



Figure 46: Kechery krut

- a) Fry the onion in cooking oil
- b) Add tomatoes and cook for a few minutes
- c) Add water and bring to boil and add the rice and mungbeans
- d) Put the mixture and cook in a pressure cooker for 15 minutes, or in a pot for 30 minutes
- e) Chop the garlic and mix it in the krut
- f) Put the cooked rice mixture in a tray and add the krut and garlic in the middle of the tray and serve

### Vegetable rice (*Shola tarkari*)

#### Ingredients

- 2 Onions
- 2 medium size potatoes
- 2 medium size tomatoes or 1  
tablespoon tomato paste
- 4 tablespoons oil
- ½ cup chick peas
- ½ cup beans  
(or 1 cup of beans or chick-  
peas)
- Spinach - a few leaves
- 2 Carrots
- 3 cups rice
- 6 cups water
- Iodised salt to taste
- Coriander - a few branches



Figure 47: *Shola tarkari*

- a) Fry the onions
- b) Add potatoes and add the chick peas after cooking them in a pressure cooker
- c) Cut the coriander, spinach and carrot into pieces and add them.
- d) Add salt and cook the mixture in a pressure cooker for 15 minutes.

### Okra stew (*Qorma Bamia*) - for 7 people

#### Ingredients:

- 1 ½ kg of okra
- 2 medium size onions
- 4 medium size tomatoes
- 4 cloves of garlic
- 5 green pepper (optional)
- 1 cup of water
- 5 tablespoons of oil
- Iodised salt to taste
- 2 cups yogurt



Figure 48: *Qorma bamia*

- a) Wash the okra tomatoes and pepper with water
- b) Peel the onions and cut them finely into small pieces
- c) Add oil and onion in a pot and heat until the onion colour changes to light brown
- d) Add the cut tomatoes, okra, pepper and garlic and leave it for 20 minutes (if using a pressure cooker, leave for 10 minutes).

Serve with 4 loaves of bread and yogurt

### Potato stew (*Qorma kachalo*) - For 7 people

#### Ingredients:

1 ½ kg of potatoes  
 2 medium size onions  
 4 medium size tomatoes  
 2 cloves of garlic  
 2 cups of water  
 4 table spoon of oil  
 lodised salt to taste  
 2 cups yogurt

- a) Wash the potatoes and tomatoes
- b) Peel potatoes and onions and cut them finely into pieces
- c) Fry the onions in a pot until they are light brown in colour
- d) Add chopped tomatoes, potatoes and garlic and leave to cook for 25 minutes in a pot or for 10 minutes in a pressure cooker

Serve with 4 loaves of bread and yogurt

**Optional:** Serve with a little lemon and salad (2 onions, 3 tomatoes, 100 gram of fresh coriander/ mint or pickle).



Figure 49: *Qorma kachalo*

## How to develop your improved family recipes

Using the information in Table 1 (in Part I) and Table 4 (in Part II) as a guide, nutrition workers can:

- evaluate the nutritional adequacy of common family dishes; and
- develop improved family recipes that meet the needs of pregnant and lactating women.

The improved recipes must have a protein-rich food, at least one vitamin and mineral-rich food and some modest oil.

If it is a complete dish, a staple or potatoes should be included in the recipe. Otherwise the improved dish can be served with bread.

## Part VI Nutrition Counselling and Cooking Demonstrations

### Nutrition counselling

#### What is nutrition counselling?

Nutrition counselling is a process in which a nutritionist, health educator or agricultural worker works with individuals, primarily caregivers or household members to:

- assess the quality of the usual diet consumed;
- identify areas where changes are needed;
- discuss and agree on changes that are acceptable and feasible to the individual or household and set targets;
- evaluate progress in adopting improved practices; and
- set new targets where necessary.

#### Why nutrition counselling?

The purpose of nutrition counselling is therefore to assist caregivers and households to:

- understand better the food and nutrition problems in the community;
- learn how to deal with these problems by:
  - ❖ exploring alternatives to current nutrition practices;
  - ❖ building on the good practices; and
  - ❖ developing new good nutrition skills.
- gradually improve the nutrition of all household members
- observe such improvements and ensure that they result in lasting positive nutrition practices that benefit all the family.

Through counselling, caregivers and household members have the opportunity for personal growth, increased self-awareness and appreciation of what their immediate environment can offer to improve their nutrition.

## How to conduct nutrition counselling

### Whom to involve

Counselling can be with individual caregivers, groups or household members. Efforts must be made to involve those with influence on household food availability, its preparation and its utilisation. This may mean involving the:

- mother-in-law
- husband
- brother/sister or brother/sister-in-law
- other older relatives
- a sympathetic neighbour.

It is important to find out how these influential people can help the caregiver or household to solve identified problems.

### Assessing current eating patterns

Nutrition counselling begins with discussions between the counsellor and caregiver or household members. The counsellor asks questions on the usual diet of the household and the nutritionally vulnerable in particular.

For example, you should find out:

- the number of meals eaten by different household members in a day (including small children and pregnant and lactating women) and the ingredients used to prepare these meals;
- how often the household consumes certain food types (e.g. legumes, dairy products, fruits, vegetable, meats and eggs) in a day, week or month; and
- foods eaten in the past 24 hours, starting with the last food eaten.

Counsellors have to find out other factors that influence nutrition-related practices and behaviour, if they do not know these already, such as:



Figure 49: Nutrition counselling with the mother, husband and mother-in-law

- cultural and religious beliefs;
- food taboos; and
- people with whom the caregiver comes into contact and the influence they have on her nutrition-related practices and behaviour.

Nutrition counselling may entail discussing various issues, such as how the household can produce or buy more food; how to feed a sick child; how to prevent infections; how to increase the time between each birth; and how to reduce women's workload.

Annex IV below provides a checklist of issues to discuss with caregivers and other household members during assessment.

#### Identifying areas requiring change

On the basis of the response by the household and personal observations, the nutrition counsellor, will be in a position to identify and list:

- good practices and negative practices which affect the diet;
- areas that require improvement; and
- practical opportunities for improving the situation using available resources, while taking into account the lifestyle of household members.

Where a child starts showing visible signs of growth failure for instance, the caregiver is often aware of the problem but may require help to make effective dietary changes.

After identifying areas where change is needed, the nutrition counsellor works together with the household and assists them to understand who is most affected by the problem and why. Then they work together to:

- prioritize changes needed; and
- find solutions for how to make the desirable changes.

The counsellor will refer to information provided in Parts I, IV and V above on the development of balanced recipes and meals. Annex V (counselling guide) also provides a summary of common nutrition problems and possible solutions.

#### Assisting households to take and maintain needed nutrition-related changes

Making nutrition-related behaviour change is a process that often requires negotiation. The caregiver may initially feel that the desired improvements are inconvenient, time consuming or costly. Through discussions and mutual understanding, the nutrition counsellor can skilfully assist the caregiver to explore and agree on:

- simple actions that can be undertaken to improve the child's diet, if the child is not feeding and growing properly; and
- when to conduct follow-up visit/discussions.

Special attention must be given to developing and promoting a variety of low-cost, easily prepared and culturally acceptable improved dishes from which the caregiver can choose from. (See Parts IV and V.)

A caregiver may not be in a position to make major changes right from the beginning. She must be encouraged to:

- set her own target and start with easier and more feasible changes which can be done within her resources; and
- set new targets and improve on the initial improvements gradually, during follow-up counselling sessions.

Some caregivers lack skills and confidence to prepare nutritionally improved dishes. Participatory food preparation demonstrations are useful ways of imparting such skills and break this barrier.

#### Follow-up counselling sessions

Follow-up nutrition counselling sessions are important for:

- assessing progress being made in adopting agreed nutrition improvement practices;
- solving problems associated with behaviours that are particularly difficult to change; and
- providing an opportunity to re-evaluate targets over a period of time and setting new targets as the household moves towards the desired and ideal nutrition practices.

#### Qualities of a good nutrition counsellor

A good counsellor should:

- be very observant and listen sympathetically to household members;
- be practical and use local resources and services;
- congratulate and encourage caregivers who do a good job and use them as peer educators; and
- keep good records to facilitate effective follow-up.

A good counsellor also avoids starting counselling and giving advice before having fully assessed and understood the household's situation. This is to prevent giving inappropriate advice.

During the counselling process, the nutrition counsellor provides practical training (demonstrations on preparation of improved feeds), information, educational materials, support, and follow-up to help caregivers and household members make and maintain the desirable dietary changes.



## Food preparation demonstrations

### Objectives of conducting food preparation demonstrations

In nutrition education, food preparation demonstrations are used to show household members, teachers, school children and other members of the public different ways of improving local dishes nutritionally, while ensuring that the improved dishes are still acceptable.

Objectives of conducting a food preparation demonstration are therefore to:

- show the audience how to prepare nutritionally improved dishes and involve them in the preparation process to the extent possible; and
- give them the chance to express their opinion of the improved/enriched food after testing it.



Figure 50: Participants tasting food in a food preparation demonstration

### Key things to consider when planning food preparation demonstrations

Three key issues to take into account when planning a food preparation demonstration are:

- Selecting recipes that conform to the local eating patterns.
- Make the necessary nutrition improvements.
- Use local foods, utensils and cooking facilities and processing equipment that are available in most homes.

Note: for improved infant foods, it will be important to give the food to children and observe how they react. Where you are facing resistance from parents and older children, ask the caregivers to feed the younger children first. School children can also be invited to taste the improved food.



Figure 51: Local cooking equipment

### Planning the demonstration

a) Decide on the:

- objectives of the demonstration;
- dishes to make, using ingredients available to households; and
- location (where the demonstration will be done), e.g.:
  - within the community as a mean of sensitising them about improvements that can be made to common local dishes;
  - at agricultural shows or other public events;
  - at health clinics and
  - at local schools.

b) Make a list of the ingredients and utensils that are needed;

c) Make sure all the ingredients, utensils and equipment are available if the demonstration is being held in a public place;

d) Where possible, inform the audience about the day of the planned demonstration and place where the demonstration will be held.

- e) If the demonstration is in a home and it is being conducted to household members only:
- find out the types of foods that the household has; and
  - ask the household to give you the ingredients you need, and the utensils and equipment you need to conduct the demonstration.
- f) If the cooking or processing time of some of the ingredients is too long, process or do some of the preparations before hand (e.g. soak or cook beans, clean rice, etc).



Figure 52: Nutrition counsellor planning a food preparation demonstration

### Actual demonstration

- Ensure that every member of the audience can clearly see what is being done;
- Explain the purpose of the demonstration, what you are going to make and give the nutritional message(s) for the day;
- Start the actual cooking and ask some of the members of the audience to assist in preparing the ingredients, e.g. cutting vegetables, pounding some of the ingredients, etc.; and
- Make sure everybody understands each step of the demonstration as you go along.



Figure 53: You can ask participants to help prepare the food

### Evaluation of experience

Ask members of audience to taste the food(s) and ask them to indicate whether the:

- appearance;
- taste; and
- smell is very good, good, not so good/fair and bad.

Ask them reasons for rating the food(s) that way (very good, good, not so good/fair, and bad).

These comments will help you

improve the aspects of the food that people find bad or not so acceptable.

On the basis of these comments, you modify the recipe to make the taste, appearance or smell more acceptable to the audience and the tasting group, if necessary.



Figure 54: Colourful food well presented



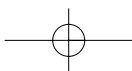
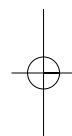
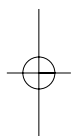
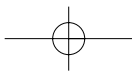
Figure 55: Participants smelling and tasting the food

## Annex I

### Main Nutrients and Their Use

Nutrient	Main use in the body
	<b>Macronutrients</b>
Carbohydrates- starches and sugars	To provide energy needed to keep the body breathing and alive, for movement and warmth, and for growth and repair of tissues. Some starch and sugar is changed to body fat.
Carbohydrates- dietary fibre	Fibre makes faeces 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.
Fats	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.
Proteins	To build cells, body fluids, antibodies and other parts of the immune system. Sometimes proteins are used for energy.
water	To make fluids such as tears, sweat and urine, and to allow chemical processes to happen in the body.
	<b>Micronutrients</b>
Iron	To make haemoglobin, the protein in red blood cells that carries oxygen to the tissues. To allow the muscles and brain to work properly.
Iodine	To make thyroid hormones that help to control the way the body works. Iodine is essential for the development of the brain and nervous system in the foetus.
Zinc	For growth and normal development, for reproduction and to keep the immune system working properly.
Vitamin A	To prevent infection and to keep the immune system working properly. To keep the skin, eyes and lining of the gut and lungs healthy. To see in dim light.
B-group vitamins	To help the body use macronutrients for energy and other purposes. To help the nervous system to work properly.
Folate	To make healthy red blood cells and to prevent abnormalities in the foetus
Vitamin C	To aid the absorption of some forms of iron. To destroy harmful molecules (free radicals) in the body. To help wound healing.

Source: *FAO Family Nutrition Guide (2004) & FAO Afghan Family Nutrition Guide (2007)*



## Annex II

### Recommended Daily Allowances (RDA) of Key Nutrients for Children 6-24 Months and Nutrients Provided by the Complementary Feeding Recipes

According to the WHO Guiding Principles on Complementary Feeding of the Breastfed Child, the total energy requirements of healthy breastfed children vary with age. These are provided in Table 7 below. The table also provides the average energy contributions of breast milk and complementary foods by age.

**Table 7: Energy Requirements of Breastfed Children and the Contribution of Breast Milk and Complementary Foods by Age**

Age Group of Child	Energy Requirements	Average Breast Milk Energy Intake	Energy Needed From Complementary Foods
6-8 Months	615 Kcal	413 Kcal	200 Kcal
9-11 Months	686 Kcal	379 Kcal	300 Kcal
12-24 Months	894 Kcal	346 Kcal	550 Kcal

**Source:** Adapted from WHO (2000) Guidelines on Complementary Feeding: Family Foods for Breastfed Children.

On the basis of the quantities per serving provided in Table 5 on page 30, and the recommended number of meals per day, recipes in this guide on average provide:

- 215-260 Kcal to children aged 6-8 months
- 338-369 Kcal to children aged 9-11 months
- 540-596 Kcal to children aged 12-24 months

The nutritional composition of the complementary feeding recipes provided in this manual are provided in Table 8.

Each recipe provides at least 36%, 30% and 25% of the energy requirements of children aged 6-8 months, 9-11 months and 12-24 months respectively from fat. In the majority of recipes, 32-43% of the energy comes from fat. In a few cases (mostly the wheat/potato and beans recipes), 23-30% of the energy comes from fat (see details in Table 8 below). Mothers must therefore be advised to give different improved complementary foods each day.

Apart from zinc, iron and in some instances calcium, other nutrients (protein, Vitamin A, B vitamins and Vitamin C) are adequately met (see Table 9 for details). To compensate for the low zinc and iron content of some of the recipes, especially those enriched with milk and eggs, mothers are encouraged to also give children pumpkin seeds snacks, yoghurt, apricots and mashed liver or meat when available, to improve their zinc and iron intake.

Table 8: Improved Complementary Food Recipes: Average Daily Intake by Age and Main Nutrients Supplied

Name of Dish	Ingredients	Children Aged 6-8 Months							Children Aged 9-11 Months							Children Aged 12-24 Months						
		Quantity (g)	Energy (Kcal)	Protein (gm)	Fat (gm)	% Energy from Fat	Vit A (RE)	Iron (mg)	Quantity (g)	Energy (Kcal)	Protein (gm)	Fat (gm)	% Energy from Fat	Vit A (RE)	Iron (mg)	Quantity (g)	Energy (Kcal)	Protein (gm)	Fat (gm)	% Energy from Fat	Vit A (RE)	Iron (mg)
Wheat with beans porridge	wheat flour	30	102	3.3	0.6		0	1.08	45	153	4.95	0.9		0	1.6	90	306	9.9	1.8		0	3.24
	beans	15	48	3.3	0.23		0.45	1.23	22	70.4	4.84	0.3		0.66	1.8	45	144	9.9	0.7		1.35	3.69
	oil	10	89	0	9.9		0	0	10	89	0	9.9		0	0	12.5	111.25	0	12		0	0
	leafy veg	15	2.9	0.225	0		27.5	0.36	30	5.8	0.45	0		55	0.7	30	5.8	0.45	0		55	0.72
	sugar	5	20	0	0		0	0	5	20	0	0		0	0	5	20	0	0		0	0
<b>Total Nutrients</b>		<b>261.9</b>	<b>6.825</b>	<b>10.7</b>	<b>36%</b>	<b>28</b>	<b>2.67</b>	<b>338.2</b>	<b>10.24</b>	<b>11</b>	<b>29%</b>	<b>55.7</b>	<b>4.1</b>	<b>587.05</b>	<b>20.25</b>	<b>15</b>	<b>23%</b>	<b>56.4</b>	<b>7.65</b>			
Wheat with milk porridge	wheat flour	30	102	3.3	0.6		0	1.08	60	204	6.6	1.2		0	2.2	90	306	9.9	1.8		0	3.24
	milk	150	72.6	5.25	5.55		78	0	150	72.6	5.25	5.6		78	0	300	198	10.5	11		0	0
	oil	5	44.5	0	4.95		0	0	7.5	66.75	0	7.4		0	0	7.5	66.75	0	7.4		0	0
	leafy veg	15	2.9	0.225	0		27.5	0.36	30	5.8	0.45	0		55	0.7	30	5.8	0.45	0		55	0.72
	sugar	5	20	0	0		0	0	5	20	0	0		0	0	5	20	0	0		0	0
<b>Total Nutrients</b>		<b>242</b>	<b>8.775</b>	<b>11.1</b>	<b>40%</b>	<b>106</b>	<b>1.44</b>	<b>369.15</b>	<b>12.3</b>	<b>14</b>	<b>34%</b>	<b>133</b>	<b>2.9</b>	<b>596.55</b>	<b>20.85</b>	<b>20</b>	<b>30%</b>	<b>55</b>	<b>3.96</b>			
Wheat with egg porridge	wheat flour	30	102	3.3	0.6		0	1.08	60	204	6.6	1.2		0	2.2	100	340	11	2		0	3.6
	egg	60	84	7.2	6		1.2	120	60	84	7.2	6		1.2	120	60	84	7.2	6		1.2	120
	oil	5	44.5	0	4.95		0	0	5	44.5	0	5		0	0	12.5	111.25	0	12		0	0
	leafy veg	15	2.9	0.225	0		27.5	0.36	30	5.8	0.45	0		55	0.7	30	5.8	0.45	0		55	0.72
	sugar	5	20	0	0		0	0	5	20	0	0		0	0	5	20	0	0		0	0
<b>Total Nutrients</b>		<b>253.4</b>	<b>10.725</b>	<b>11.6</b>	<b>40%</b>	<b>28.7</b>	<b>121</b>	<b>358.3</b>	<b>14.25</b>	<b>12</b>	<b>30%</b>	<b>56.2</b>	<b>123</b>	<b>561.05</b>	<b>18.65</b>	<b>20</b>	<b>32%</b>	<b>56.2</b>	<b>124</b>			

1 - Details on the number of meals a day by age group and the quantities per meal are given in Table 5 above



Part • IV Improved Complementary Feeding Recipes

Name of Dish	Ingredients	Children Aged 6-8 Months						Children Aged 9-11 Months						Children Aged 12-24 Months								
		Quantity (g)	Energy (Kcal)	Protein (gm)	Fat (gm)	% Energy from Fat	Vit A (RE)	Iron (mg)	Quantity (g)	Energy (Kcal)	Protein (gm)	Fat (gm)	% Energy from Fat	Vit A (RE)	Iron (mg)	Quantity (g)	Energy (Kcal)	Protein (gm)	Fat (gm)	% Energy from Fat	Vit A (RE)	Iron (mg)
Potatoes and beans mash	potatoes	100	75	1.7	0		0	1.08	200	150	3.4	0		6	2.2	300	225	5.1	0		9	3.3
	beans	15	48	3.3	0.23		3	1.1	22	70.4	4.84	0.3		0.66	1.8	60	192	13.2	0.9		1.8	4.92
	oil	15	89	0	9.9		0	0	12.5	111.25	0	12		0	0	15	133.5	0	15		0	0
	leafy veg	15	2.9	0.225	0		27.5	0.36	30	5.8	0.45	0		55	0.7	30	5.8	0.45	0		55	0.72
	sugar	5	20	0	0		0	0	5	20	0	0		0	0	5	20	0	0		0	0
	<b>Total Nutrients</b>		234.9	5.225	10.1	38%	30.5	2.54		357.45	8.69	13	32%	61.7	4.7		576.3	18.75	16	24%	65.8	8.94
Potatoes and milk mash	potatoes	100	75	1.7	0		0	1.08	200	150	3.4	0		6	2.2	300	225	5.1	0		9	3.3
	milk	150	72.6	5.25	5.55		78	0	150	72.6	5.25	5.6		78	0	300	198	10.5	11		0	0
	oil	10	44.5	0	4.95		0	0	10	89	0	9.9		0	0	15	133.5	0	15		0	0
	leafy veg	15	2.9	0.225	0		27.5	0.36	30	5.8	0.45	0		55	0.7	30	5.8	0.45	0		55	0.72
	sugar	5	20	0	0		0	0	5	20	0	0		0	0	5	20	0	0		0	0
	<b>Total Nutrients</b>		215	7.175	10.5	43%	106	1.44		337.4	9.1	15	40%	139	2.9		582.3	16.05	26	40%	64	4.02
Potatoes and egg mash	potatoes	100	75	1.7	0		0	1.08	200	150	3.4	0		6	2.2	350	262.5	5.95	0		10.5	3.85
	egg	60	84	7.2	6		1.2	120	60	84	7.2	6		1.2	120	70	98	8.4	7		1.4	140
	oil	10	44.5	0	4.95		0	0	10	89	0	9.9		0	0	15	133.5	0	15		0	0
	leafy veg	15	2.9	0.225	0		27.5	0.36	30	5.8	0.45	0		55	0.7	30	5.8	0.45	0		55	0.72
	sugar	5	20	0	0		0	0	5	20	0	0		0	0	5	40	0	0		0	0
	<b>Total Nutrients</b>		226.4	9.125	11	43%	28.7	121		348.8	11.05	16	41%	62.2	123		539.8	14.8	22	36%	66.9	14.5

Table 9: Percentage of RDAs Provided by Complementary Food Recipe Plus 550 ml Breast Milk

Children's Age group	6-8 Months Energy						9-11 Months						12-24 Months					
	Wheat-based Recipes with			Potato-based Recipes with			Wheat-based Recipes with			Potato-based Recipes with			Wheat-based Recipes with			Potato-based Recipes with		
	beans	Milk	Egg	beans	Milk	Egg	beans	Milk	Egg	beans	Milk	Egg	beans	Milk	Egg	beans	Milk	Egg
Energy	102	110	109	106	107	106	103	111	107	109	110	109	108	108	106	111	111	106
Protein	135	151	182	124	139	170	164	179	208	158	157	185	235	230	221	236	200	202
Fat	156	183	186	179	182	185	141	153	146	148	164	166	117	138	137	126	163	148
Calcium	45	86	50	46	86	50	50	90	54	51	90	54	56	134	56	59	134	58
Magnesium	90	88	68	124	122	103	115	104	85	189	172	153	164	132	91	285	224	202
Zinc	30	34	35	32	36	38	38	40	41	45	44	46	61	60	48	78	66	59
Iron	19	8	14	19	8	14	28	14	20	31	14	21	80	29	38	101	31	43
Vit B1	69	69	63	96	95	89	86	81	75	144	134	128	79	66	53	140	144	111
Vit B2	66	125	137	69	127	139	73	130	142	78	134	147	69	157	117	78	162	134
Niacin Equ.	104	116	123	128	140	146	130	143	150	189	190	197	53	61	121	195	181	183
Vit B6	43	58	52	139	154	148	58	67	61	252	259	253	53	61	40	235	234	244
Folic Acid Equ	145	94	115	150	98	120	191	114	136	204	123	145	149	66	72	187	73	84
Vit B 12	111	231	244	111	231	244	111	231	244	111	231	244	111	351	244	111	351	267
Vit C	87	91	86	131	134	129	101	103	98	187	190	185	103	108	98	234	238	250
Ret. Equiv.	98	118	126	109	118	126	103	117	120	108	124	132	108	138	136	115	156	148

2 - Calculated using the Nutrisurvey Linear Programming software (<http://www.nutrisurvey.de>)

## Annex III

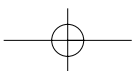
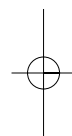
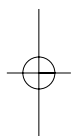
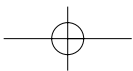
### Recommended Salt Intake in Household Measures

In the absence of WHO or any other international guidelines, the recommended salt intake levels by the Food Standards Agency, UK, were used as a basis for reducing the salt levels of complementary foods.

Mothers were advised to use one two-finger pinch of salt for every feed, but not more than 4 two-finger pinches in a day. Should the father prepare the porridge, he is advised to take a very light two-finger pinch of salt. Table 10 below gives the recommended daily salt intakes by age group.

**Table 10: Salt Intake Recommended by the Food Standards Agency, UK**

Age group	Recommended daily intake expressed in household measures
< 6 months	1-3 pinches of salt
7-12 months	4 pinches of salt or $\frac{1}{8}$ teaspoon
1-3 years	$\frac{1}{4}$ teaspoon
4-6 years	$\frac{1}{3}$ teaspoon
7-10 years	$\frac{1}{2}$ teaspoon
11-14 years	$\frac{3}{4}$ teaspoon
> 14 yrs & adults	< $\frac{3}{4}$ teaspoon



## Annex IV

### Checklist for Assessing Household Food Availability and Family Feeding Practices

**As far as possible, both the mother and father should be present during discussions on family feeding**

#### **A. General Issues**

1. Location : village, district and date of the assessment
2. Family details: number of children, their ages and name of child who is the focus of the nutrition counselling visit (in months):

#### **B. Land Ownership, Crops Grown and Animals Owned**

3. Main source of income; land and vegetable garden ownership
4. Crops grown (main crops, vegetables, fruit trees) and animals kept (type and numbers)
5. Foods purchased from bazaar (types, quantities and how often) and other sources of food (gifts and bartering)
6. Year round availability of staples (cereals and potatoes), legumes, dairy products, eggs, meat vegetables, fruits, wild foods (specifying food type). You can prepare a seasonal food calendar

#### **C. Family Feeding**

7. Main family dishes (types) and seasonal variations if any; reasons for the variation
8. Number of daily meals consumed; seasonal variations in the number of meals and the reasons for this variation
9. Usual composition of the meals
10. Number of snacks consumed daily, type and when they are consumed during the day
11. Daily, weekly or monthly frequency of consuming vegetables, fruits, dairy products, eggs, meat, oil etc.
12. How food is shared among the various family members and who eats with whom
13. Which foods are considered hot and cold, and why. When are they eaten or not eaten; any other food taboos

**D. Breastfeeding and complementary feeding (ask mother)**

14. Breastfeeding: is colostrum given? Is breastfeeding exclusive for the first 6 months? How often is the child breastfed during the day and night? How does the mother know when the child has taken enough breastmilk? When is breastfeeding stopped, who decides on when to stop and how to stop
15. Other foods/fluids given at birth: what (e.g. oil, butter, local herbs, etc) and why?
16. Complementary foods: how are new foods introduced? What types of foods are given (including ingredients of dishes)? What quantity is given per feed (in household measures)? How often is the child fed during the day and by whom?
17. Foods from the family pot: when does the child start eating such food? What are the first dishes he is given? How often is the child fed such foods? When does the mother stop preparing a special complementary food for the small child?
18. Child that is no longer breastfed: what type of meal is the child given (including composition of meals and ingredients commonly used)? How often is the child fed during the day (check also what the child ate during the past 24 hours, starting with the last meal eaten)

**E. Feeding Sick Children or Children without Appetite**

19. Common childhood illnesses (e.g. diarrhoea, vomiting, fever, etc) and the types of food given to such sick children. Description of the dish preparation, the quantities given to the sick, and the frequency of feeding.
20. What does the caregiver do when the child refuses to eat (i.e. spits the food), vomits or has no appetite ?

**F. General advice about child feeding**

21. Concept of healthy or unhealthy foods for the small child: which foods are healthy/unhealthy and why ? Where does the information come from ?
22. Information source: Who gives family advice on what and how to feed the child at different ages ?
23. What advice has the mother followed? Were any modifications made to make the advice more practical/feasible? What were the reasons for any modifications made?

24. What advice could the family not follow, and why?
25. Who are the best people to give advice on how to feed small children and what is the best way to give such advice?

**G. Feeding the Sick without Appetite (diarrhoea and cold/flu) - older children and adults**

26. What foods are given? Which ingredients are used and how are the foods prepared and fed? How often does a sick person eat in a day?

**H. Feeding for Pregnant and Lactating Women**

27. Pregnant women: Number of daily meals; main dishes and their ingredients. Are any snacks or special foods given to pregnant or lactating women? If yes, why?
28. Are any foods considered as healthy or unhealthy foods for pregnant and lactating women? Why and what/who is the source of this information?

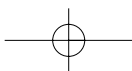
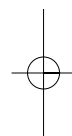
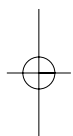
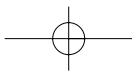
**I. Hygiene**

29. Hand washing: when do family members wash their hands and how? Do they use soap or not?

**J. Observations**

Observe the following:

- environmental hygiene: is the house clean? Is there a latrine? Are animals living inside the house?
- Personal hygiene: do household members look clean (clothes, hands...)? Do you see them washing hands?
- Food hygiene: is the kitchen clean? Are foods protected from flies and dirt? Does the mother wash hands before handling food?





## Annex V

### Assessment and Counselling Guide

#### Problems and recommendations by age group

##### Age Group: 0 to 5 months

*Ideal feeding pattern: Exclusive breastfeeding.*

**Problem 1: Mother not breastfeeding exclusively**

- 1.a If the child is not yet breastfed and is being given feeds before breastfeeding, put the child to the breast and breastfeed frequently, day and night.
- 1.b If throwing away colostrum, give colostrum to the child because it protects the baby from illnesses while the baby is developing its own defence system.
- 1.c If giving water or tea because the child gets thirsty, stop giving water. Breast milk is a clean and safe liquid that contains enough water and all the food for the baby during the first six months of life.
- 1.d Stop giving porridge or other foods/liquids before 6 months and breast-feed more frequently: on demand, i.e. at least 8-10 times per day (24 hours). The more the child sucks, the more milk is produced.

**Problem 2: Mother tries to breastfeed exclusively, but feels she is not producing enough milk because the child cries often, resulting in the early introduction of weaning foods.**

- 2.a Stop introduction of other foods before the age of 6 months and breast-feed more frequently: 2 more times per day, minimum of 8 times per 24 hours.
- 2.b Use both breasts at each feed and empty breasts completely by feeding longer.
- 2.c Increase the nursing mother's intake of milk and other fluids, beans and other pulses, eggs and fish if available and seasonal or wild fruits. If the mother is already eating 3 meals a day, it is important for her to eat 1-2 additional tablespoonfuls of potatoes, rice or an extra piece of bread per meal to enable her to produce more clean, safe and ready to drink milk for the baby.

- 2.d Hold the baby in the right position (correct attachment to nipple) and feed frequently.
- 2.e Encourage the nursing mother to take a little more rest each day.
- 2.f Encourage the husband to increase support to the breastfeeding mother and encourage positive communication between the wife and husband.
- 2.g Encourage other members of the household to increase support to the breastfeeding mother so as to give her chance to rest and relax a little more

**Ideal feeding pattern: Breastfeed until 2 years of age, and wean the child gradually from breast milk**

**Problem 3: Abrupt weaning because the mother is pregnant**

- 3.a Continue breastfeeding a small infant during pregnancy. Breast milk from a pregnant mother is still very safe for the child.
- 3.b Increase nursing-pregnant mother's intake of milk/milk products and other fluids, eggs, beans, fish if available and seasonal or wild fruits. Give her an extra 2-3 tablespoonful of potatoes or rice or extra piece of bread at each of the main meals because she is now eating for 3 people, i.e. herself, the nursing child and the new baby inside her
- 3.c Use contraceptives to prevent early pregnancies

**Problem 4: Abrupt weaning because the mother is ill**

- 4.a Continue breastfeeding a small infant even if the mother is sick. Breast milk from a sick mother is still safe for the child.
- 4.b In the case of acute respiratory infections (colds, coughs, and in particular TB), the mother should cover her mouth with a cloth when she is breastfeeding and is in close contact with the child.
- 4.c The mother should drink many fluids and eat regularly to help her get better soon and produce good milk for the child.

**Problem 5: Abrupt weaning because the mother dies**

- 5.a If baby milk formulas are affordable, buy and prepare the milk formulas for such a child if less than 6 months. Make sure not to use too much water (follow the instructions on the box).
- 5.b If formulas are not available, or too expensive, you can use animal milk, and add a little bit of sugar. Boil it before giving it to the child to make sure it is clean from germs.
- 5.c When feeding the child other milks, use clean utensils (cups, spoons). Avoid using a baby bottle, because it becomes easily dirty and can cause the child to have diarrhoea.
- 5.d Encourage a female relative to breastfeed the child, as a substitute for the mother. But if this relative has the same disease that caused the mother to die, it is better to use other milk.

**Age Group: 6-8 months**

**Ideal feeding pattern: Frequent breastfeeding complemented by nutritious soft foods.**

**Problem 6: Child's porridge or bread and soup (*shorba*) given to the child is not nutrient-dense enough (contains too much water)**

- 6.a Enrich the child's porridge with milk/milk products, bean flour, chickpea flour, eggs, oil, sugar, etc.
- 6.b Add pounded vegetables to the child's food and cook for 2-3 minutes.
- 6.c When pounding beans, cereals, or vegetables in an awang (pistol and mortar), make sure it is very clean. If the *awang* is being used to crush tobacco, encourage families to use another one for the cooking (if possible).
- 6.d When available, give mashed fruits (including wild fruits) to the child.
- 6.e Store/buy and keep a small amount of beans/chick peas and other pulses (*bocoli*, *dâl*, mungbean) for enriching the child's porridge at a time when family stocks are likely to go down. This helps to ensure variety in the child's diet.

**Problem 7: Depending on the age of the child, the child is fed too few meals a day, in addition to breastfeeding on demand, or is given too small amounts**

See Table 11 below for details on the number of meals and quantity of food to give to the child.

7.a Feed one extra nutritious meal or snack every day.

7.b Increase serving by 1-2 tablespoonfuls each meal (or more if child will take more) and encourage child to eat the whole serving

**Age group: 9-11 months**

**Ideal feeding pattern: Continued breastfeeding, nutritious soft foods and family foods.**

**Problem 8: Solid family foods introduced but child given bread with very watery *shorba* or the liquid part of meals.**

8.a Make sure child is given plenty of mashed vegetables, beans, meat and fish if available to eat with the staple.

8.b Give nutritious snacks (ground dried berries -*tut*-, jam, apple sauce, cheese), including fruits to the child.

8.c If child eats from same dish with other children, give a separate serving in the child's own plate and monitor to be sure that the child eats all the food.

**Age Group: 12 months-2 years**

**Ideal feeding pattern: Eating the family diet plus extra feeds, with continued frequent breastfeeding.**

**Problem 9: Child fed less than 3 meals per day because of the mother's heavy workload, especially during the busy agricultural summer months**

9.a Bulk preparation: prepare some of the flours e.g. wheat, rice, bean, peas flour in large quantities/stocks to feed the child for 2 - 3 weeks;

9.b Give the child an extra meal a day. If working in the field, prepare one of the meals at home and bring extra food to the field with you.

9.c Give child different snacks between the 3 meals

**Table 11: Proposed Daily Meals by Age**

Age of Child in Months	Daily Meals of Complementary Food
6-8	2-3
9-12	3
12-24	3 meals plus 2 snacks between main meals
25-36	3 meals plus 2 snacks between main meals

### Feeding the Sick Child

*Ideal feeding pattern: Continue feeding small quantities of soft easy to swallow nutritious foods frequently*

**Problem 10: Mother stops feeding or limits food intake while the child has diarrhoea and is vomiting**

- 10.a Continue breastfeeding and breastfeed more often if the child is still breastfeeding
- 10.b Continue giving soft foods without spices if weaning and give small amounts at a time more frequently
- 10.c Select the food that the child likes most, exercise patience in feeding the sick child, feeding small quantities more frequently

### Feeding the Sick with no Appetite

*Ideal feeding pattern: Give small meals of soft, nutritious and easy to digest foods to the sick*

**Problem 11: Patients are not hungry and do not want to eat**

- 11.a Prepare soft foods, that are easy to digest and contain a good mixture of foods (i.e., bread/rice/potatoes + milk/milk products/eggs/meat/fish + vegetables/fruits);

**Problem 12: Looking after the sick takes a lot of time of the caregiver and there is a risk of cross-infection between the patient and caregiver.**

- 12.a Practice good personal and food hygiene to minimise possibility of infecting the patient and other members of the household
- 12.b Exercise patience when caring and feeding the sick but encourage them to do what they can still do by themselves;
- 12.c Share caring task with other members of the family

## Problems Related to Food Preparation

*Ideal food preparation practice: Wash Hands with Soap before preparing meals and before eating*

**Problem 13: Small child does not wash hands before eating, or washes them without soap and in dirty water, and utensils in which the child eats are dirty.**

- 13.a Wash the hands of the child by pouring clean water from a clean container and by using soap, before he or she begins to eat.
- 13.b Make sure the utensils in which the child eats are clean and that the area in which the child is eating is also clean (e.g. avoid the child putting his hands in the dirt or touching animals while eating).

**Problem 14: Mother does not wash her hands before preparing and serving meals, and after having cleaned a child**

- 14.a The mother should wash her hands by pouring clean water from a container and by using soap, before preparing meals, before serving the food to the child, and after she has washed the child.

*Ideal food preparation practice: Soak legumes overnight before cooking to reduce on cooking time and save fuel*

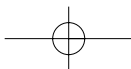
**Problem 15: Beans not often soaked**

- 15.a Soak beans in clean water, preferably over night before cooking. This reduces cooking time and saves cooking fuel

*Ideal food preparation practice: Put enough water to cook vegetables without putting extra that is eventually thrown away*

**Problem 16: Vegetables are boiled, the excess water is thrown away and the vegetables fried in oils**

- 16.a Some of the vitamins dissolve in water and are destroyed by heat. Therefore during cooking, some of the vitamins go into the cooking water. Therefore only put enough water to cook vegetables and do not throw away the excess. If you have excess water, then use crashed nuts or eggs to make a sauce.



- 16.b Use a pressure cooker to cook the vegetables: put a small amount of water in the pressure cooker (enough to cover the bottom of the pot, at mid-finger length), close the pressure cooker, and let them cook for 10 minutes.

### Pregnant and lactating women

*Ideal feeding pattern: eat diverse foods, especially protein and micronutrient-rich foods, and increase the amount of food eaten.*

**Problem 17: Pregnant mothers avoid eating some foods because they cannot digest them easily or because they feel nauseous (e.g. pulses, meat, etc.)**

- 17.a Prepare foods that are easily digestible (e.g. mashed foods, minced meat, etc.)

- 17.b Eat smaller amounts of food but more often

**Problem 18: Pregnant and lactating women avoid some foods because they believe they are bad for them.**

- 18.a Explain to the mother the value of the different foods, their role in the body and why it is important for her health and that of her child that she eats them. Invite her to try some foods and see if it really harms her.

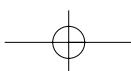
**Problem 19: Pregnant and lactating women do not eat frequently enough**

- 19.a Eat one more meal each day, and eat various snacks between meals (e.g. cheese, milk, fruit...). Increase the consumption of meat and fresh fruits and vegetables.

**Problem 20: Pregnant and lactating women have a lot of work in the household and fields, and feel tired and weak.**

- 20.a Ask other family members to help more with the domestic tasks and other work the mother must do

- 20.b Take more rest (more sleep at night, stop and rest during the day).





This Guide, *Healthy Food, Happy Baby, Lively Family: Improved Feeding Practices for Afghan Children and Mothers*, has been designed to help Afghan families improve their nutrition, in particular that of young children and pregnant and lactating mothers. It can be used by agricultural extension workers, home economics officers, health workers, literacy and school teachers, and anybody who wishes to make better use of available foods to improve family nutrition.

In particular, this Guide provides improved complementary feeding recipes that are specifically designed to complement breastmilk and help children from six months to two years of age meet their nutritional requirements for growth and development.

Improved family recipes are also provided for all the family, including children under five years eating from the family pot and for pregnant and lactating women.

The Guide provides guidance on how to develop and improve other complementary feeding and family recipes, using a variety of locally available ingredients.

Finally, it includes advice on how to provide effective nutrition education and counselling to families, and on how to organize food preparation demonstrations in communities.

ISBN 978-92-5-105920-3