

# Nutrition Guidelines for Early Childhood Development Centres



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Health  
REPUBLIC OF SOUTH AFRICA

**A long and healthy life for all South Africans**

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# **Guidelines on nutrition for Early Childhood Development Centres**

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***Nutrition Guidelines for Early Childhood Development Centres***

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## **Foreword**

It gives me pleasure to introduce the 'Operational guide on nutrition for Early Childhood Development centres', an initiative that is an important part of the South African Government's plan to improve Early Childhood Development services.

The Early Childhood Development Policy of South Africa directs the commitment of the Government of South Africa to access to Early Childhood Development (ECD) services for all young children. The early years of a person's life are important for short and long term development and health. Reviews of current ECD programmes have revealed that there is a short-coming in the delivery of nutritional support to infants and young children, especially for children under the age of two, those living in poverty and in under-serviced areas.

This document will help overcome this short-coming, through the provision of information about good nutrition and for planning and implementation of optimal food services in ECD facilities. This can help to improve the total nutritional intake of children of this age, and hence contribute to their short and long term health.

These food based standards for children in ECD centres should be used by childcare workers and ECD practitioners as the minimum standard for nutrition and child care in all settings. These standards should be used in all guidance and legislation by all tiers of government. Childcare and other early year's settings should be required to demonstrate an understanding and application of the contents of this document as part of the registration process.

## **Acknowledgements**

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The testing of the document was done through collaboration with Ekurhuleni Department of Social Development which contributed practical aspects in the guide. The development of this guiding document was made possible through the technical support of Global Alliance for Improved Nutrition (GAIN) with funding from Irish Aid.

**MP MATSOSO**  
**DIRECTOR-GENERAL: HEALTH**



## Abbreviations

EBF	Exclusive Breast Feeding
EBM	Expressed Breast Milk
ECD	Early Childhood Development
GAIN	Global Alliance for Improved Nutrition
HIV	Human Immunodeficiency Virus
MUAC	Mid upper arm Circumference
RtHB	Road to Health Booklet
SANHANES	South African National Health And Nutrition examination Survey
SOP	Standard operating procedure
WBPHCOT	Ward Based Primary health Care Outreach Team

## **Glossary of terms**

### **Absorption**

The process when water and other substances (like nutrients and medicines) are taken up by tissues of the body. Digested food is absorbed from the intestine into the blood in the form of nutrients.

### **Anaemia**

Too little haemoglobin in the blood cells, or too few red blood cells. Haemoglobin carries oxygen to the body. A person with anaemia is tired, breathless, pale, and has poor resistance to infection.

### **Anthropometric measurements**

When height, length, weight, mid upper arm circumference, skin fold thickness or other body measurements are made on a person they are called anthropometric measurements. They are often described by comparing the ratio of one to another e.g. weight-for-height. These measurements can be compared to international norms for healthy people of that age and gender, and this information is used to assess nutritional status.

### **Antibodies**

Substances that are produced in the body to fight harmful organisms e.g. bacteria and viruses.

### **Artificial feeding**

Feeding a baby using infant formula instead of breastfeeding.

### **Bacteria**

Tiny living things that cannot be seen by the naked eye, but only with the help of a microscope. Some cause diseases, while others are useful. Bacteria (together with viruses and fungi) are also called microorganisms or germs.

### **Bleach**

A strong-smelling liquid containing chlorine, which is used for disinfecting surfaces e.g. toilets, basins, food contact surfaces, plates and utensils. Regular (unscented) bleach can be used to kill bacteria in water to make it safe to drink.

### **Bottle feeding**

Feeding any food or liquid from a bottle with a teat.

### **Complementary food**

Any foodstuff, whether in liquid, solid or semi-solid form, given to an infant after the age of 6 months as part of the transitional process during which an infant learns to eat food appropriate for his or her developmental stage while continuing to breastfed or fed with infant formula.

### **Complementary feeding**

Giving correct foods to infants after the age of 6 months in addition to breastmilk or infant formula. The foods complement (go well with) breastmilk, as they provide extra nutrients needed by the baby from 6 months of age.

### **Cup feeding**

Feeding a baby or young child a liquid from an open cup, rather than a bottle. The cup should not have a spout or straw.

### **Enriched foods**

Foods that have extra nutrients added, on a voluntary basis, by the manufacturer.

### **Fortified foods**

These foods have extra vitamins and / or minerals added to them by law. The nutrients that are added are ones that research has shown many people do not get enough of from normal eating patterns. Fortified foods that are available in South Africa are maize meal, bread flour, bread that is made with bread flour and iodated salt.

### **Exclusive breastfeeding**

An infant receives only breastmilk and no other liquids or solids, not even water, with the exception of drops or syrups consisting of vitamins, mineral supplements or medicines.

### **Expressed breastmilk**

Breastmilk that a mother expresses to be fed to her baby at a later time.

### **Growth monitoring and promotion**

The weighing, taking height/length and measuring MUAC of a child and plotting on the appropriate graphs in the RtHB. The curves for weight for height, weight for age and height for age are assessed to determine if the child is growing well. At the same time the caregiver should be given information on childcare and nutrition that is relevant at that age, to promote optimal growth.

### **Healthy eating plan**

A diet that provides the foods that supply the correct amount of nutrients needed for health.

### **Immune system**

The system in the body that produces substances to defend the body against harmful external microorganisms, especially bacteria, virus, fungi and parasites.

**Infant formula**

Means a formulated product specially manufactured in accordance with the applicable international nutrition and safety (Codex) standards to satisfy, by itself, the nutritional requirements of infants during the first months of life up to the introduction of appropriate complementary foods.

**Iodated salt**

Commercial table salt that has been fortified with iodine. In South Africa this is required by law.

**Kilocalorie / kilojoule**

Unit of measure of the energy in foods. The metric unit is the kilojoule. 1 kilocalorie is equivalent to 4.18 kJ; a kilocalorie is usually called a calorie.

**Macronutrients**

Nutrients required by the body in relatively large amounts; namely protein, carbohydrate and fat.

**Malnutrition**

Malnutrition is an impairment of health resulting from a deficiency, excess or imbalance of nutrients. It includes over-nutrition, which is excess of one or more nutrients, usually of energy, and under-nutrition, which refers to a deficiency of energy and / or one or more essential nutrients.

**Meal**

Food served during one of the regular daily occasions for eating, usually to describe the food eaten by one person.

**Meal plan**

A meal plan is a list of the basic components of each meal, usually used by institutions where food is prepared for many people. It is used as a starting point in the planning of the menu. It is the pattern on which the food items on the ration scale will be divided on a daily menu.

**Menu**

A menu is a detailed list of foods to be served in a single meal, or all meals over one or more days. The menu is the central planning document for a facility that prepares food for many people, it determines the food budget, the food to be purchased, the equipment needed, the skills and numbers of staff needed and the work schedule.

**Menu planning**

Menu planning is the process of designing the way and type of foods that will be included into the menu to meet the needs of the people being served.

### **Micronutrients**

These are nutrients needed by the body in very small amounts. Vitamins and minerals are micronutrients.

### **Mixed feeding**

The practice of giving a baby who is less than 6 months old food and / or liquids other than breastmilk. This term can also be used to describe the practice of giving a formula fed baby who is less than 6 month old, solids or other liquids before the age of 6 months.

### **Nutrient**

Part of a food that is absorbed and used by the body for energy, growth, repair and protection from disease Nutrients are the macronutrients (protein, carbohydrate and fat) and micronutrients (vitamins and minerals).

### **Nutritional status**

The nutritional status of a person is described by using anthropometric measures, biochemical measures, a clinical examination and / or a dietary assessment and analysis. This will show if the person has undernutrition and / or overnutrition or if they are well nourished.

### **Puree**

Food that has been made smooth by cooking and passing through a sieve or mashing with a fork. An electric blender can also be used to puree foods.

### **Responsive or Active feeding**

Responsive feeding applies psycho-social care and includes the following: Feeding infants directly and assisting older children when they feed themselves, being sensitive to their hunger and satiety cues. Feeding slowly and patiently, and encouraging children to eat, but not forcing them.

### **Road to Health Booklet (previously called Growth chart)**

A chart used to record a child's growth, through regular weighing and recording of weight, Height, MUAC and immunisation provided.

### **Snack**

A small quantity of food or a small meal, eaten between meals, or in place of a meal.

### **Soft food with lumps**

Food that is cooked or processed to a soft consistency, but that is purposely prepared with lumps, e.g. mashed potatoes that are not completely mashed, or mashed fish, with some small flakes of fish flesh.

## 1. Introduction and background

*"Optimal nutrition during infancy and childhood is critical to ensuring optimal child health, growth and development. Inappropriate infant and young child feeding practices, for example, sub-optimal or no breastfeeding and inadequate complementary feeding, are significant threats to child health."*

*Department of Health, 2013, Infant and young child feeding policy*

Healthy eating in infancy and childhood, as part of a healthy and active lifestyle, is vital for optimal health, growth and development. The nutritional status of children influences their short and long-term physical and mental development. The damage to physical and mental well-being caused by poor nutrition has the potential to be irreversible.

In South Africa different forms of malnutrition are seen in children. This includes high levels of stunting, the emergence of overweight and obesity and poor intake of certain micronutrients. This malnutrition is due in part to poor breastfeeding practices, poor complementary feeding practices and poor quality of the complementary diet.

In 2012 the Human Sciences Research Council did a study for the Department of Health to look at the health of many people all over South Africa (SANHANES 2013). It was found that:

- 1 in every 4 children aged 0 – 3 years is stunted.
- 1 in 20 children aged 0 - 3 years is wasted
- 1 in 10 children aged 0 - 3 years is underweight.

Children who are **stunted** have a healthy weight for their height, but they are shorter than they should be at that age. When a child is stunted their brain does not get enough of the right nutrients at a time when it is growing and developing. Children who are stunted may be less able to learn before, during and after school. **Underweight** children weigh too little for their age. Slow weight gain, or weight loss is usually one of the first signs that a child does not have enough food or has been sick. This is usually due to a recent food shortage or a recent illness. **Wasted** children have a low weight for height. This shows current severe undernutrition or severe disease.

One form of undernutrition can occur when the child does not get enough of the **mineral iron**. A young child needs iron so the body can make new red blood cells when the blood volume increases with the child's growth. Iron is also needed to replace red blood cells, as these are continually broken down and new ones made. Iron is also needed to assist in growth and development and to help the body fight infections. If a person does not have enough iron they may develop anaemia. In South Africa about 1 in 10 girls and boys aged 0 – 5 years were found to have anaemia (SANHANES 2013).

In the same study, 4 in 10 girls and half of boys aged 0 – 5 years in South Africa were vitamin A deficient. Vitamin A deficiency is most likely to occur during childhood, when the vitamin A needs of the body are high. Vitamin A deficiency is a m

major contributor to childhood illness and death. Children with a deficiency of vitamin A are at increased risk of dying from infectious diseases such as respiratory tract infections, diarrhoea, measles or malaria.

While undernutrition in children continues to be found in many communities, more and more **overweight or obese** children are now also seen. The SANHANES study (2013) showed that among children 2 – 5 years of age overweight and obesity among boys was 17.5 % and 4.4 % respectively, and among girls 18.9 % and 4.9 % respectively. Childhood overweight can lead to lifelong overweight which can be a risk factor for health problems such as diabetes, high blood pressure, stroke and osteoarthritis.

## **1.2 The need for 'Guidelines on nutrition for Early Childhood Development centres'**

Eating is an important part of everyone's life. Encouraging adults and children to follow a healthy eating plan does not mean denying them food they enjoy. Healthy eating means enjoying a variety of foods, eaten in mixed meals, with suitable snacks and drinks when needed.

People who provide childcare to children under the age of 5 years are uniquely positioned to positively influence the food, and hence, nutritional intake of children. They lay the foundations for the children to have accurate knowledge about healthy eating and positive attitudes towards food and a healthy lifestyle.

All people who prepare and serve food to children need knowledge and skills on infant and young child feeding. This document provides information on healthy eating for infants and children cared for in ECD centres.

## **1.3 The objectives**

The objective of this guidelines are to provide ECD practitioners and caregivers information on how to plan, prepare and serve appropriate, nutritious, adequate and safe foods to children in their care.

This includes understanding and implementing information on:

- Healthy eating for babies and children
- Preparing and serving nutritious food according to the menu
- Child health services
- Personal and environmental hygiene
- Food safety

The guidelines also provides information to raise awareness of the importance of good nutrition in the early years, and suggests ways that this information can be communicated to parents and other caregivers.

## **1.4 Target Groups**

The guidelines are intended to be used at the following facilities:

- ECD Centre/crèche providing partial care for children from birth to 6 years.
- Places of safety

Roles of the primary target group for this guidelines are as follows:

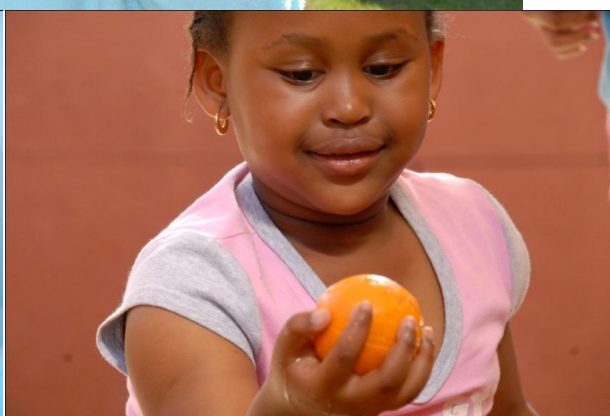
- **ECD Practitioners and other staff:** Implement the recommended nutrition and health practices within the context of the guidelines over and above their other duties.
- **Dietitians or Nutritionists:** To provide technical support and monitor adherence to nutrition practices
- **Health care professionals:** provide outreach health services in ECD centres
- **Social Workers:** Monitor adherence to recommended standards and liaise with health care professionals

## **1.5 Policy framework**

The guidelines (as described in section 2.3) are formulated, and the content prepared, within the context of a number of Government Policies and Acts; these include:

- Early childhood development policy, 2015
- Infant and young child feeding policy, 2013
- National policy for food service management in public health establishments, 2010
- National guidelines for the safe preparation, storage and handling of infant formula, 2006
- The Foodstuffs, Cosmetics and Disinfectants Act 54 1972 and related regulations such Regulations relating to foodstuffs for infant and young children, R991, 6 December 2012.





## **2. Healthy eating for babies and children up to 6 years**

The amount of energy and nutrients that children need increases when they grow older, bigger and become more active. Until 6 months of age the energy, nutrients and all the water babies need are supplied from breastmilk. After 6 months of age these nutrients come from breastmilk and the foods that the baby is given (this is called complementary feeding).

During the period of complementary feeding, from 6 – 23 months of age, the child gradually becomes used to eating foods that the family eats. At the end of the complementary feeding period, family foods and cow's milk entirely replace breastmilk. The family foods given must be good choices, and be given in the correct amounts to meet the child's needs.

The human body gets energy and nutrients from food, this keeps people alive, enables them to grow and develop and to be active. If children do not have enough good food they will not be able to grow well or be active.

Healthy eating means enjoying a variety of foods, eaten in mixed meals, with suitable snacks and drinks when needed. The South African 'Guidelines for Healthy Eating' are guidelines to help families learn how to develop healthy eating plans that provide the nutrients needed for good health. These guidelines are written for adults and children over the age of 5; recommendations for babies and children under 5 are based on these, including the World Health Organization (WHO) recommendations for complementary feeding. The 'Guidelines for Healthy Eating' are explained in **Annexure A**.

Physical activity and movement are key aspects of a child's development and are part of child's healthy living. All children, including children with disabilities should have the opportunity to be physically active.

The benefits of physical activity include:

- Physical activity builds muscle strength and fitness and helps to develop skills of balance, co-ordination and climbing.
- Active children are more likely to be active adults

**\*\* Children who are at ECD centres during the day should have a chance to play and be active for at least 30 minutes each day. Activity can be encouraged both indoors and outdoors.**

## **2.1. Feeding babies under 6 months of age**

Breastfeeding is recognised all over the world as the best way to feed a baby; until the baby is 6 months old no other food or drink is needed, this is called exclusive breastfeeding (EBF). Sadly very few babies in South Africa are fed in this recommended way.

Babies under the age of 6 months should only receive breastmilk, thereby being exclusively breastfed. EBF until a baby is 6 months old, and continued breastfeeding until the child is 2 years or older is an important contributor to child health and development. Many babies under the age of 6 months are being given water, tea or other liquids or given diluted maize meal porridge. Some breastfed babies are given infant formula instead of breastmilk for some of their feeds. This is called ***mixed feeding and is a common practice in South Africa; it is of great concern for the following reasons:***

- This can potentially be harmful as these foods and liquids will displace breastmilk; then the baby will not get all the energy and nutrients that it needs.
- These foods may cause damage to the lining of the baby's gut, and this can allow microorganisms to enter the body.
- In breastfed infants younger than 6 months, whose mothers are HIV infected, early introduction of food and drinks, other than breastmilk, increase the baby's risk of contracting HIV.
- The food or drinks may be contaminated and this can cause diarrhoea.

Other mothers may have opted to formula feed and it is important for ECD practitioners or caregivers to know how to safely prepare the infant formula. ECD centres must not feed babies under the age of 6 months anything except for expressed breastmilk or infant formula. In the case of a mother or an infant not being able to feed from a breast, **cup feeding** expressed breastmilk or infant formula is the preferred alternative method.

The benefits of cup feeding over bottle feeding are:

- Cup feeding does not interfere with infant learning to suckle from the breast.
- Cups are easy to clean and thus less opportunity for bacteria to develop.
- Cup feeding necessitates holding an infant, providing vital interaction and stimulation.
- Cup feeding is easier than spoon or syringe feeding; baby will receive required volume of milk faster.
- It allows the baby to use his or her tongue and to learn taste
- It encourages coordinated breathing-suck-swallow
- It allows the infant to control the amount and the rate of feeding

Standard operating procedures 1,2 and 3 should be used to guide on feeding infants up to the age of 6 months.

## **Standard Operating Procedure (SOP) 1: Handling, storing and feeding expressed breastmilk (EBM) at ECD centres**

*The amount of EBM that a breastfed baby needs per day can vary from baby to baby and from day to day. The amount that must be given when the baby is at the centre must be discussed with the mother, as it will be influenced by how long and how frequent the baby breastfeeds at home. This must be revised monthly.*

**Purpose: To guide ECD practitioners and caregivers on handling, storing and feeding EBM in ECD centres.**

### **Procedure:**

- i. Encourage mothers who are breastfeeding to continue to do so, and to bring expressed breastmilk to the ECD centre for feeding their baby during the day.
- ii. The mother should place the expressed breastmilk in a sterilised glass jar or hard plastic jar (labelled BPA free) with lid, which is labelled with the **baby's name** and **the date it was expressed**.
- iii. Use EBM labelled with oldest date first (first in first out).
- iv. Store the EBM for 6 hours at room temperature if it was expressed that morning or up to three days in the fridge (including the time in the fridge after it was expressed).
- v. Warm the EBM at room temperature by standing the EBM container in a jug of warm water. Use within an hour while it is still warm.
- vi. Do not boil EBM or heat using the microwave oven as it will destroy some of the properties and may burn the infant's mouth.
- vii. Breastmilk will separate as it stands – mix gently before use.
- viii. Pour the correct amount of milk into the baby's cup and feed the baby. If milk is left over and the baby is satisfied the excess milk in the cup must be discarded.

## **SOP 2: Preparing and using infant formula**

*The amount of infant formula milk that a baby needs per day can be estimated based on their weight and age. The amount that must be given when the baby is at the centre must be discussed with the mother, as it will be influenced by the amount the baby gets at home. This must be revised monthly.*

**Purpose: To guide on appropriate and safe preparation and feeding of infant formula for babies that are not breastfed.**

**Procedure:**

- i. The mother must deliver the measured formula powder for each feed in a sterilised container. This must have the name of the baby written on it and indicate how much water must be added.
- ii. The caregiver must prepare the formula freshly for each feed.
- iii. The formula should be prepared in a dedicated area. The person preparing should clean the surface and all equipment that is to be used, and must thoroughly wash their hands. Bleach can be added to the water that is used to wipe the surfaces and rinse the equipment. Refer to Annexure B for processes to follow for sterilising feeding bottles and cups.
- iv. Boil the water and leave to boil for three minutes (rolling boil). It should be left to cool for a about 10min minutes, but used when it is still hot (above 70 °C).
- v. Place the pre-measured formula in a sterilised measuring jug, and add water to make up the desired volume. The level of water in the jug must be checked at eye level. Stir the mixture.
- vi. Pour the formula into the baby’s cup, and give to the baby as soon as it is cool enough.
- vii. Throw away any left-over formula after an hour.
- viii. Use table 1 as a guide on the amount of infant formula needed per day. This should be given in 8 – 12 feeds over 24 hours. Always read the tin for the number of scoops of formula to be added according to volume/amount of water.

**Table 2: Amount of infant formula needed per day**

<b>Age of baby</b>	<b>Weight</b>	<b>Amount of milk per day</b>
<b>3 months</b>	6 kg	900 ml
<b>4 months</b>	7 kg	1050 ml
<b>5 months</b>	7.5 kg	1125 ml
<b>6 months</b>	8 kg	1200 ml
<b>7 – 8 months</b>	8.5 kg	1275 ml
<b>9 months on</b>	The amount of formula must be gradually decreased as the amount of complementary food is increased, reaching about 600 ml per day.	

### **SOP 3: Cup Feeding**

**Purpose:** To guide ECD practitioners and caregivers on appropriate cup feeding practice

**Procedures:**

- i. Use the required volume of EBM or formula as indicated on SOP 2, table 1. and an additional 5 ml to allow for spillage???? how much formula???
- ii. The caregiver should hold the baby sitting upright or semi-upright on her lap in a position that is comfortable for both caregiver and baby.
- iii. Support the infant's back, head and neck.
- iv. Place the rim of the cup on the baby's lower lip and the corners of his mouth. Do not apply pressure on the baby's lower lip
- v. Tilt the cup gently so that the milk just reaches the infant's lips.
- vi. Follow baby's pace – DO NOT POUR milk into baby's mouth, hold the cup and let the baby drink by himself/herself.
- vii. When the baby has had enough, he/she will close his/her mouth and not take any more.
- viii. Measure feeds over 24 hours, not just at one feed. If baby is taking too little, offer more frequent feeds.



## **2.2 Feeding babies from 6 months to 6 years**

### **2.2.1 Feeding babies and children from 6 – 12 months of age**

At 6 months of age babies need to learn to eat soft, pureed and mashed foods. The baby has a small stomach, so cannot have a lot to eat or drink at one time. However the baby needs more energy and nutrients than can be supplied by breastmilk alone, so also needs solid foods. This phase of feeding is called complementary feeding because the foods complement the nutrients found in breastmilk. It is important to continue breastfeeding or give infants formula to non-breastfed babies.

There are many commercial food products that are manufactured for use in complementary feeding and some that are targeted at toddlers. It is not essential to use these foods; especially those which are much more expensive than a home prepared equivalent (e.g. cooked vegetables, fruit puree).



### **2.2.2. Feeding from 12 months - 6 years**

From the age of 12 months children can obtain most of their foods from the family diet (assuming the family has a healthy eating plan). However they still have high nutrient needs compared to the amount of food they eat, and so most food choices should be foods that provide key nutrients.

Early childhood is a good time for children to learn the basics of healthy eating, and to enjoy a healthy eating plan.

Children who have eaten too many foods with low nutritional value between meals (e.g. biscuits, chips, sweets) may not be hungry at meal times; this can lead to a nutritional deficiency as their intake of nutrients will be too low.

Until the age of 3 years children will typically only eat as much as they need. After this age they may start to eat things for pleasure, for example when certain foods are associated with enjoyable advertising or with parties. If access to unsuitable foods is not controlled, children may eat more than they need and could become overweight. Children, like adults, should not eat more than they need for fuel for their bodies. Sugar and sugary foods should be used sparingly when feeding the child.

**Honey:** *this is not to be used before 12 months of age and is not needed after that. There is a risk of transmission of botulism, which is why it is not recommended before 12 months. Honey is a type of sugar, and like sugar, is not necessary to add it to the complementary diet.*

### **2.3.3. Food safety in complementary feeding**

Complementary foods should be prepared and given in a safe manner in order to minimise the risk of contamination with germs. Poor hygienic practices during food preparation and feeding is one of the major cause of childhood diarrhea. These can be prevented by washing hands with water and soap before food preparation and eating, by using clean utensils to prepare and serve food. Utensils used for feeding children should also be clean.

- Use freshly prepared food:
  - Prepare food for infants and young children and serve it to them immediately after it is prepared, as soon as it is cool enough to eat.
  - Mix infant formula or powdered milk just before it is needed.
- Use foods with a low risk of contamination for meals away from the ECD centre, for example during school trips (*e.g. yoghurt, fresh fruit, bread, avocado and peanut butter*).
- Use an open cup for giving babies and young children drinks.
- Teach the child to wash his/her hands with soap after using the toilet and before eating.

### **2.2.4 Responsive/Active feeding**

Responsive feeding is a term to describe the recommended way to feed babies and children by interacting with them. This includes looking into their eyes and smiling, and using gestures and sounds to encourage them to interact with the person who is feeding them. It also includes active encouragement, which is assistance given to a young child to encourage them to eat. This includes praising, talking to the child, helping the child put food on the spoon, feeding the child and making up games and songs about food and eating.



### **2.3. Feeding Children with special needs**

Children with disabilities should, wherever possible, be encouraged by family, friends and support staff to eat a varied diet. The guidelines for healthy eating for children of their age are used as a basis for meal planning, with adaptations for their special needs.

The adaptation may need to be in the crockery and cutlery they use, the texture of the food, the quantity of food eaten at one time. Children who have special needs at mealtimes must not be excluded from the social integration with other children at these times. Supervision or assistance from a staff member must not single the child out or be given at a special table.

Care should be taken that sources of important nutrients such as vitamin A, vitamin C, iron, zinc and calcium are included in their diet regularly. Children with disabilities who eat a poor variety of foods; e.g., because they are very selective or because they have eating difficulties, may be at greater risk of not getting all the nutrients that they need.

### **2.4. Feeding sick children**

When a child is sick or recovering from an illness, their appetite may decrease and their body may not absorb and use nutrients well. If a child is sick several times a year his / her growth in height might slow or stop. Children can lose weight quickly when they are sick especially if they are not fed. They may not regain this weight if they are not fed extra food when they are better and have recovered.

When a child is sick:

- Feed slowly and patiently.
- Give mashed or soft food, especially if the child has difficulty swallowing.
- Give the child his or her favourite foods if that is all he or she will eat.
- Give small frequent, meals. The number of meals a day will depend on how many times the child will be happy to eat; feed them more often than usual, and give as much food as they are prepared to take.
- Breastfeed more often and for longer at each feed, and increase water intake if the child has diarrhoea or a fever.
- A child must still be fed, even if he or she has diarrhoea. The food may appear to increase the volume of diarrhoea, but some nutrients are being absorbed.

\*\* When the child is getting better after being sick encourage the child to eat more so that he or she can

regain the weight that was lost:

- Be responsive to the child's requests for extra food.
- Give extra food by giving an extra meal or extra food between meals.
- Increase the size of the meals given to the child. Add margarine, oil, powdered milk or peanut butter to increase the energy density of foods if the child is only eating small quantities.

## **SOP 4:**

### **Feeding children 6 months to 6 years**

**Purpose:** To guide ECD practitioners and caregiver on how to feed complementary foods to children 6 months to 6 years in ECD centres.

#### **Procedure:**

##### **From 6-8 months:**

- i. It is important that the first foods the baby eats are high in iron.
- ii. Start by introducing two to three spoons of soft food per meal twice a day.

*From 6-8 months (1-2weeks):*

- Give boiled egg yolk and mix with soft porridge, adding breast milk to make a smooth paste
- Include one serving of chicken liver cooked until soft, mashed and sieved,
- Give dry beans (soaked in hot water until the skin is soft and peeled), mashed,

*From 6-8 months (3 weeks):*

- Introduce at least one vegetable or fruit rich in vitamin A such as orange fleshed vegetables (pumpkin, butternut) and soft fruit. Use mashed or pureed foods.
- iii. The baby may need time to get used to eating foods. You can stir some breast/formula milk into the rest foods to encourage him or her to eat them.
  - iv. Use a separate bowl for the baby's food so you can know how much food he or she has eaten.
  - v. Talk to the child during feeding and feed the child with patience.
  - vi. Continue feeding EBM or infant formula.
  - vii. From 8 months give five small meals per day, about ¼cup of food per meal.

##### **From 9 -11 months:**

- i. Feed the baby small, mixed meals five times a day.
- ii. Increase the amount gradually until the baby is having half a cup of food at each meal.
- iii. Include finely chopped foods such as chicken, mince, liver, stiff porridge, soft cooked vegetables and soft.
- iv. Include foods that babies can pick up.

##### **2. From 12 months to 6 years**

- i. Feed the child five times a day.
- ii. Include a greater variety of foods from all **food groups. Include at least one** serving of food from each of the four key food groups each day:
  - Include one serving of liver, fish, chicken, meat or eggs every day
  - Use at least one vegetable or fruit rich in vitamin A such as dark green leafy vegetables, orange fleshed vegetables and fruit
  - Use dry beans, split peas or lentils as an ingredient in meals or as a side dish
- iii. Continue feeding EBM up to 2 years and beyond. If the child was formula fed, pasteurised cow's milk can be introduced at 12 months (WHO recommends use of pasteurised cow's milk from 6 months)
- iv. Increase amount up to three-quarters to one cup of food at each meal
- v. Offer food cut in small pieces, finger foods and sliced foods for the child to feed him/herself
- vi. Offer the child clean, safe water to drink from a cup
- vii. Do not include food/snacks that do not provide good nutrition (e.g. sweets, potato chips, maize snacks etc.)
- viii. Teach children social cues and appropriate behaviour at meal times.
- ix. Teach them to sit and eat, and to focus on their food and eating at meal times.
- x. Do not use food as a reward or withhold it as punishment.
- xi. Serve meals at regular times, and in a regular place.

## 3. MENUS AND RECIPES

### 3.1 Menus

The **menu** is a detailed list of foods to be served in a single meal, or all meals over one or more days. The menu may list items in a mixed dish and it may indicate cooking method and / or fillings or sauces that are served. Each meal will have foods from a number of food groups. A meal ( with the exception of vegetables) will not usually include more than one food from the same food groups, e.g. potatoes and rice are not to be served in the same meal.

- If the centre is open for **5 to 8 hours, two snacks and lunch must be served.**
- If the centre is open for less than **5 hours, a mid-morning snack** must be provided.
- The centre should also **provide breakfast** if most of the children will not have been given this meal at home (for example if the centre opens early to allow parents to get to work).

***Table 2 and Table 3 are the suggested menus for ECD centres for the different age groups are listed below. It should be noted locally available consumed food can be used to replace other items such as pounded Mopani worms(meat dish), indigenous leafy vegetables and amadumbe (starchy foods). To ensure variety, two week menu cycle is recommended.***

### 3.2 Foods that are not recommended

- Instant porridges or cereals are high in sugar and salt
- **Processed meat products** such as polony, Vienna, crumbed fish, chicken nuggets, beef patties or sausages. These may contain a little meat, but be high in added fat, preservatives and salt.
- **Dairy that is raw and/or sweetened. Raw milk**, that is milk from a cow or goat that has not been boiled, pasteurised or heat treated; this is because heating removes the risk of disease transmission from the cow / goat, and because the heat treatment makes the protein digestible. Some yoghurt and some drinking milks are sweetened, rather give plain yoghurt and add fresh fruits.
- **Tea and coffee creamers, condensed milk or milk blends**; these products either contain none of the important nutrients from milk (protein, calcium, riboflavin), or do not have much of them. They are not designed for feeding infants and young children; they **MUST NOT BE USED** in place of breastmilk or cow's milk.
- **Cold drinks, fruit juice, Squashes, tea, coffee.** Fruit juice is high in sugar and does not contain the fibre that fresh fruit does. Fruit juice can lead to tooth decay, especially when it is used between meals. Babies and young children may not get enough fibre from their diet if they use juice instead of whole fruit. These

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drinks may also take away their appetite, and then they will not eat enough food at meals.

- **Commercial snack foods** that have a low nutrient value, and possible high sugar, fat and salt content e.g. potato chips, sweets, chocolate, biscuits, cake, baby rusks and baby biscuits.
- **Condiments/seasonings** that are high in salt such as stock cubes, spices, soup packets. Rather use flour or corn flour to thicken sauces and add herbs to flavour food.

**Table 3.1: Menu week one**

Meal times	Portions per child			MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
	6-8 months	9-23 months	24 months- 6 years					
<b>Breakfast</b> Starch dish	3Tbs- ¼ cup	½ -1 cup (125 -250 ml)	1-2 cups	Maize meal porridge	Maltabella porridge	Maize Meal porridge	Maltabella porridge	Oats porridge
Milk	Breast milk or 150 ml formula	Fresh/powdered full cream milk ¼ cup	½ cup	Milk (add to porridge)	Milk (add to porridge)	Milk (add to porridge)	Milk (add to porridge)	Milk (add to porridge)
Sugar	No sugar	1 teaspoon	1 teaspoon	Sugar	Sugar	sugar	Sugar	Sugar
<b>Mid-Morning Snack</b> Starch		1 slice	2 slices	Brown bread	Brown bread	Brown bread	Brown bread	Brown bread
Filling/topping/spread		1 teaspoons	2 teaspoons	Margarine	Scrambled egg	Peanut butter	Margarine	Peanut butter
Milk	Breast milk or 150 ml formula	Fresh/powdered full cream milk ½ cup (125 ml)	Fresh/powdered full cream milk 1 cup (250 ml)	Milk	Milk	Milk	Milk	Milk
Beverage	½ cup	1 cup	As much as the child wants but not less than 1	Water	Water	Water	Water	Water

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			cup					
<b>Lunch</b> Meat dish	3Tbs- ¼ cup	¼ cup	1 cup	Chicken stew	Savoury Samp and Beans	Savoury mince	Chicken livers in sauce	Pilchard fish
Starch dish	Pureed/mashed/blended	¼ cup	½ cup	Rice		Spaghetti	Pap	Potatoes mashed
Vegetables		½ cup	1 cup	Sweet potato	Cooked carrots	Green beans with potatoes	Morogo/spinach	Beetroot salad
Beverage	½ cup	As much as the child wants but not less than ½ <b>cup</b>	As much as the child wants but not less than <b>1 cup</b>	Water	Water	Water	Water	Water
Afternoon snack	Soft/mashed/pureed ¼ fruit	Cut into pieces ½ -whole fruit	Cut into pieces ½ -whole fruit	Fruit	Fruit	Fruit	Fruit	Fruit

Table 3.2: Menu week two

Meal times	Portions per child			MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
	6-8 months	9-23 months	24 months-6 years					
<b>Breakfast</b> Starch dish	3Tbs- ¼ cup	½ -1 cup (125 -250 ml)	1-2 cups	Maize meal porridge	Maltabella porridge	Maize Meal porridge	Maltabella porridge	Oats porridge
Milk	Breast milk or infant formula	Fresh/powdered full cream milk ¼ cup	½cup	Milk (add to porridge)	Milk (add to porridge)	Milk (add to porridge)	Milk (add to porridge)	Milk (add to porridge)
sugar	No sugar	1 teaspoon	1 teaspoon	Sugar	Sugar	sugar	Sugar	Sugar
<b>Mid-Morning Snack</b> Starch		1-2 slices	2 slices	Brown bread	Brown bread	Brown bread	Brown bread	Brown bread
Filling/topping g/spread		2 teaspoons	2 teaspoons	Margarine	Peanut butter	Margarine	Scrambled egg	Peanut butter
Milk	Breast milk or 150 ml formula	Fresh/powdered full cream milk ½ cup ( <b>125 ml</b> )	Fresh/powdered full cream milk 1 cup ( <b>250 ml</b> )	Milk	Milk	Milk	Milk	Milk
Beverage	½ cup	As much as the child wants but	As much as the child	Water	Water	Water	Water	Water

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		not less than <b>½ cup</b>	wants but not less than <b>1 cup</b>					
<b>Lunch</b> Meat dish	3Tbs- ¼ cup <b>Pureed/ mashed/ blended</b>	¼ cup	1 cup	Bolo cube beef stew	Lentil stew	Beef and soya mince stew	Savoury Samp and Bean	Macaroni and cheese
Starch dish		¼ cup	½ cup	Pap	Rice	Mashed potatoes		
Vegetables		½ cup	1 cup	Cooked cabbage	Pumpkin (no sugar added)	Cucumber and tomato slices	Cooked morogo/spinach	Cooked carrots
Beverage	½ cup	As much as the child wants but not less than <b>½ cup</b>	As much as the child wants but not less than <b>1 cup</b>	Water	Water	Water	Water	Water
Afternoon snack	Soft/mashed/pureed ¼ fruit	Cut into pieces ½ -whole fruit	Cut into pieces ½ -whole fruit	Fruit	Fruit	Fruit	Fruit	Fruit



### **3.3 Grocery list to purchase for two weeks menu**

- **Starch:** Maize meal, rice, maltabella, oats, samp, potatoes, macaroni, spaghetti, bread
- **Fats / oils:** Margarine, cooking oil
- **Meats:** Bolo cube beef stew, mince, chicken livers, chicken
- **Other proteins:** Beans, lentils, Pilchards, eggs, milk, cheese, peanut butter
- **Vegetables:** Morogo/ spinach, green beans, cabbage, beetroot, carrots, tomatoes, onions, cucumber, pumpkin, sweet potatoes,
- **Fruits:** Variety in season
- **Other:** Salt, herbs

### **3.4 Recipes**

A lot of people who work as cooks in the centres do not use recipes, as they have cooked the same foods many times before. However standardised recipes, for all the dishes on the menu, are very useful to the person who has to work out the food budget and/or the shopping list. The recipes are also useful if the regular cook is absent from work.

When recipes are used as stated the results will be ensured with regard to amount of food produced, and the quality of the food and minimising wastage. Standardised recipes must be adapted for each centre, based on the number and ages of children that are served and depending on the equipment available. The standardised recipes used in this guidelines, provides list of ingredients, information on amount and the method to follow to prepare the dish. You can adapt the standardised recipe to suit the needs of your facility, by adjusting preparation methods, ingredients or cooking times.

***Annexure C** provides a set of recipes to be followed when preparing meals in ECD centres.*

### **3.5 Purchasing procedures for groceries**

The first step in the process of purchasing (buying) food is to work out **what you need and how much you need** of each item and this informed by the menu and the ingredient list on the recipes. Your shopping pattern will depend on where you get your food and how often you go for shopping.

It is best to work out a standard grocery list, based on your menu and quantities needed; and then to use this as a basis each week / month. **Adjustments** must be made to the grocery list where needed; some weeks you may need less food if there is a public holiday, or you may need less of one ingredient if you had a food donation. You may substitute a menu item with another food from that food group, e.g. use cabbage when beetroot is not available or is too expensive.

The food that is bought must be good quality, so it is important that the person who goes to do the shopping knows how to check the quality of foods before buying.

### **3.6 Preparation tips**

#### **3.6.1 Meat, fish, chicken, liver, eggs**

- Cheaper cuts of meat or packages of chicken may not be good value for money if they have a lot of bones and fat.
- When cooking meat choose a cooking method that is suited to the cut of meat, those that are likely to be tough should be cooked with a moist heat method.
- When chicken is prepared ensure that the chicken is cooked thoroughly to make sure that all the micro-organisms (bacteria) that may be in the chicken are destroyed.

#### **3.6.2 Vegetables**

- Prepare vegetables just before cooking; this will preserve taste and nutritional value.
- Do not leave vegetables to soak in water longer than needed, especially if they have already been peeled and cut. This is to prevent the nutrients from the vegetables leaking into the water.
- Scrape or peel very thinly, carrots, potatoes and sweet potatoes only if needed.
- When cooking vegetables only use a small amount of water. Allow the water to come to the boil before adding the vegetables. Bring to the boil again quickly, so as to keep the cooking time as short as possible.
- Do not add salt to the water before cooking has started. Only add near the end of the cooking time, and use very little salt.
- Do not use bicarbonate of soda in vegetables as it destroys vitamin C.
- Keep the lid on when boiling vegetables, this will help to keep the cooking time as short as possible.
- Boil vegetables until they are just tender.
- If frozen vegetables are used they must not be defrosted before cooking. Place them in boiling water and cook as fresh vegetables.
- Some vegetables may be baked in the oven. Butternut and pumpkin may be baked in their skin. Cut into convenient sizes slices when needed.
- Serve vegetables as soon as possible after they are cooked.

#### **3.6.3 Salads**

- Ingredients should be cold and fresh.
- Wash vegetables and fruit well, and rinse in salted water. Shake vegetable leaves to dry them.
- Salad dressing is usually added just before serving, unless stated otherwise in the recipe.
- Salads can be garnished (decorated) to make them look appetizing; e.g. this can be done with carrot curls, cucumber cones or slices, or tomato slices.

### **3.7 Cooking facilities**

An ECD centre should have all the essential equipment that are needed for the storage, preparation, and serving of meals according to the menu; and to clean up after preparation and serving. The staff must be aware of legislation that controls food and the standards for hygiene. **Annexure D** depicts proposed equipment to be used in the ECD for meal preparation.

## 4. Child health services

The Department of Health provides services to babies and young children to help prevent illnesses and promote overall health. These services include **growth monitoring and promotion, immunisation, vitamin A supplementation, deworming** and are provided for free in the Public Health Sector. All parents and caregivers should ensure that their children are taken to the clinic to receive routine health care as scheduled.

The child health services are extended to ECD centres by mobile clinics and Ward Based Primary Health Care Outreach Teams (WBPHCOT). It is important for ECD practitioners to establish/strengthen linkages with the WBPHCOT. On registration ECD centres should check child's Road to Health Booklet (RtHB) to see if the child is up to date. The table below shows the key child health services and intervention.

Table 4: Key child health interventions

<b>Key intervention/service</b>	
<b>Growth Monitoring and Promotion (GMP)</b>	<p>Growth monitoring is the measuring of the weight, and height of the child and plotting the weight and height in the child's RtHB. The growth curves are observed and interpreted to check if they are growing as expected.</p> <p>Furthermore, the mid-arm upper circumference (MUAC) is also checked to screen for undernutrition.</p> <p>Growth promotion (education) is and should be done at all growth monitoring occasions.</p> <p>All children should be taken for GMP as per schedule on the RtHB.</p>
<b>Immunisation</b>	<p>Every child needs a series of immunisations during the first 6 years of life, as immunisation offers protection against several dangerous diseases. A child who is not immunised is more likely to suffer illness, become permanently disabled, become undernourished or die. Immunisation protects children and the communities they live in against diseases. It should also be noted children will need immunisation at ages 6 years and 12 years.</p>
<b>Vitamin A supplementation</b>	<p>Vitamin A is an important nutrient for health, but many children in South Africa do not eat enough food with vitamin A. A shortage of vitamin A contributes to illness and death in children.</p> <p>All children 12 - 59 months should receive Vitamin A capsules every six months.</p>
<b>De-worming</b>	<p>Children are exposed to parasitic worms since they mostly play with soil and sand. Worm infestation should be treated / prevented as follows:</p> <ul style="list-style-type: none"> <li>• De-worming medicine is given to all children from 12 – 59 months, once every 6 months. This should preferably be given with vitamin A.</li> <li>• Stools (faeces) must be disposed of properly; they must not be left on the ground. Worm eggs can pass from those stools to other people.</li> <li>• Washing hands with soap and water</li> </ul>

#### **4.1 Practices promoting child health in ECD centres**

##### **4.1.1 Achieving and maintaining hand washing standards**

More than half of all illness and death among young children is caused by germs which get into the child's mouth via food and water. One of the most common ways that this happens is when people do not wash their hands or do not wash their hands well enough.

Illnesses can be prevented by washing hands with soap and water before cooking and eating, and after going to the toilet or changing a baby's nappy. This helps to stop germs

getting onto food or into the mouth. Soap and water must be easily accessible so that children and adults will wash their hands at recommended times. After washing hands with soap the hands should be rinsed under running water and if they are dried the towel must be clean.

***\*\*Children must be taught how to wash their hands before eating and after using the toilet.***



Centres that do not have built in basins with running water can construct 'tippy taps' for children and care givers to use. These use a limited amount of water and can be built near the toilets and near where people eat, so that hand washing is readily possible.

#### **4.1.2 Eating well for a healthy mouth.**

Having a clean, healthy mouth is an important part of having a healthy body. Tooth decay and gingivitis (swollen gums) are diseases that can be prevented. Sugar sweetened products (from food or drinks) can cause tooth decay if they are eaten many times a day. It is recommended that children should be given clean safe water instead of sweetened drinks. Sugar and sugar containing foods that remain in the mouth for a long time (e.g. sucking sweets), are a higher risk than those that are quickly swallowed.

#### **4.1.3 Being active**

Physical activity and movement are key aspects of a child's development. All children, including children with disabilities should have the opportunity to be physically active. The benefits of physical activity include:

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- Physical activity builds muscle strength and fitness.
  - It helps to develop skills of balance, co-ordination and climbing.
  - Active children are more likely to be active adults, an active lifestyle promotes.
- \*\* Children who are at ECD centres during the day should have a chance to play and be active for at least 30 minutes each day. Activity can be encouraged both indoors and outdoors.**





## **5. MAINTAINING A SAFE AND HEALTHY FOOD ENVIRONMENT**

### **5.1 The healthy eating policy**

Every ECD centre has the responsibility of ensuring a healthy food environment that adhere to safe preparation, handling and storage of nutritious meals for children. The first step to show that responsibility is for the ECD centre to show their commitment by developing a healthy eating policy that should be visibly displayed in all ECD centres for parents to read.

The written policy must be communicated to everyone; including parents, staff and children. The policy should include information on the guidelines of foods that are served by the centre, foods that are sent with the children from home. The policy should be explained to all parents when they enrol their children at the centre.

The policy can include information on the following:

- The weekly menu will be on display, any adaptations will be noted.
- The meals served will be explained to parent when the child is enrolled, parents will be responsible for the remaining meals during the day.
- The food provided in the menu will be based on guidelines for healthy eating for children, dependent on their age.
- Clean safe drinking water will be available at all times.
- Foods served and available at ECD centre will be nutritious and will exclude processed foods high in fat, sugar and / or salt.
- No advertisements for non-nutritious foods will be present in the ECD centre or its premises.
- No product promotion for non-nutritious foods will be allowed at the centre.
- Carers will sit with children when they are eating, and will actively feed younger children. This will be done in a friendly atmosphere. A television or other distraction will not be on during meal times.
- Withholding food will not be used as a form of punishment.
- Parents will be advised about suitable and not suitable foods to be sent to the centre with children for parties or for when children do not receive all food from the centre.
- All children will be supervised when they wash their hands with soap and water before eating.

### **5.2 Food from home**

In some cases parents may give children food from home to eat, foods that are permitted should be in accordance with the healthy eating policy. This should be discussed with parents when the child is enrolled, and they should agree to abide by the policy.

It is reasonable to ask that children who are given food to bring to the centre have similar food to what is being served at the centre. For example, the policy could require that children do not bring packets of chips or sweets for snacks, when other children are receiving sandwiches. Likewise children should not bring white bread if the policy states that only brown bread will be served at the centre. Children who have special food needs for medical reasons must be considered individually with regards to the implementation of this aspect of policy.

### **5.3 Food for parties and functions**

It is expected that children's birthdays could be celebrated; however there should be a limitation on bringing sugary, fatty and salty foods. Foods that are permitted should be in accordance with the healthy eating policy e.g. parents could be asked to only bring cake or cup cakes for birthday celebrations. Party packs that contain various non-nutritious snacks and beverages should not be allowed in the ECD centres.

### **5.4 Managing food donations**

Some centres may have food donated to them by businesses or individuals. This should only be accepted if the centre can be sure that the food is freshly prepared and is safe (not contaminated). Dry groceries that have past their use by date must never be accepted. Food that is not permitted in terms of the nutrition policy (cake, biscuits, fizzy drinks etc.) must not be accepted.

Facilities that regularly receive donations of food may compile a 'Wish List' that indicates food that is appreciated, but also has a low risk for contamination when not expired. Examples include long life milk, peanut butter, rice, tinned fish, baked beans in tomato sauce, or cleaning materials such as bars of hand soap and bottles of dishwashing liquid. Infant formula, bottles, teats should not be accepted as a donation.

### **5.5 The importance of food safety**

It is important that the food that is served to children and the water they drink is clean and safe. If dangerous micro-organisms (germs such as bacteria) get into food or drinks they can make the person who eats the food or has the drink very sick. The food poisoning may cause diarrhoea or vomiting, and it may be very severe. The people who are most likely to get sick from eating food or water that has dangerous germs are those who are young, the elderly and people who are infected with HIV.

Food poisoning occurs when the food eaten contains dangerous levels of germs, which cause illness. These germs could be bacteria, viruses or fungi (mould).

Most food poisoning can be prevented by following some simple rules of hygiene. Food poisoning can be prevented by following the key guidelines for food safety. These will:

- **Prevent germs from reaching** food and drinks. This can be from dirty hands or dirty utensils, or from dirty water.
- **Prevent germs from multiplying** in foods and reaching dangerous levels.

Key actions for keeping food safe are described in **Annexure E**.

### 5.6 Safe storage of food and other items

Food must be properly stored as soon as it is delivered to the centre. This will help to maintain quality and safety of food. When food is delivered, check that the right amount is delivered, that the food is of good quality, that the packaging is not damaged and that the food has not passed its “use by” date. Store food as soon as possible after delivery; especially items that must be kept cold or frozen. The table below depict recommended storage for various food and chemicals in the ECD centre:

**Table 5: Recommended storage for various food and chemicals in the ECD centre**

Storage area	Commodities	Temperature	Recommendation
<b>Dry store/kitchen cupboard</b>	<ul style="list-style-type: none"> <li>Tinned goods (jam, tomato puree) and goods in plastic containers (peanut butter).</li> <li>Dry ingredients (flour, mealie meal, rice, milk powder).</li> <li>Condiments</li> <li>Packaging material such as tin foil and serviettes</li> <li>Some vegetables as indicated in Table 6.</li> </ul>	Room temperature.	The dry store area must be cleaned daily, and deep cleaned weekly. Nothing must be stored directly on the floor.
<b>Fridge</b>	<p>All perishable foods must be stored in the fridge. This includes:</p> <ul style="list-style-type: none"> <li>Fresh meat, fish, chicken or liver.</li> <li>Fresh milk, maas, yoghurt and cheese.</li> <li>Some vegetables and fruit, as indicated in Table xx.</li> <li>Margarine.</li> </ul>	The fridge temperature must be below 5°C.	<p>Wash fruit and vegetables before storing in the fridge.</p> <p>Store uncooked meat, fish and chicken below other foods and in drip free containers.</p> <p>The fridge must be cleaned daily, and deep cleaned weekly.</p>
<b>Freezer</b>	<p>Foods that may be kept frozen include:</p> <ul style="list-style-type: none"> <li>Meat</li> <li>Fish</li> <li>Chicken</li> <li>Vegetables</li> <li>Bread (where regular deliveries are not possible)</li> </ul>	Frozen food should be stored at a temperature below -18°C.	<p>Frozen foods should be tightly wrapped and air removed from packages so that ice crystals to not form and cause freezer burn.</p> <p>If the original package is damaged or food is repacked in smaller quantities it must be well packed so as to seal it.</p> <p>Food that has defrosted must not be refrozen. All food is to be clearly labelled. The freezer must be cleaned and defrosted once a month.</p>

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<p><b>Chemical and cleaning goods store/cupboard</b></p>	<ul style="list-style-type: none"> <li>• All chemicals (i.e. soap and cleaning products).</li> <li>• Disposable aprons, caps, gloves and masks.</li> <li>• Cleaning equipment.</li> </ul>	<p>Room temperature</p>	<p>These products must be stored away from the food areas. The products must be stored in their original containers, and if decanted the smaller containers must be labelled.</p> <p><b>Do not use cold drink or water bottles to store chemicals.</b></p>
<p><b>Equipment store/cupboard</b></p>	<p>All equipment and utensils.</p>	<p>Room temperature</p>	<p>This equipments and utensils should be stored safely in the store room or cupboards</p>

## 6. MONITORING

### 6. Monitoring

Routine monitoring and evaluation should be done by the personnel from the departments of Social development, Health and Basic Education. A suitable monitoring form (**see checklist in Annexure F**) should be used when monitoring the food service and health practices in care facilities. The reports should be sent to districts and shared with provinces.

The purpose of monitoring is to:

- To encourage provision of nutritious meals at ECD centres
- Encourage ECD centres to implement good food service standard practices, as explained in these guidelines.
- Build capacity among ECD practitioners and staff responsible for meal preparations
- Ensure that the ECD practitioners are promoting good health practices in the ECD centre (hand washing, mouth care, being active etc.)
- Identify shortcomings in the kitchen and address them as soon as possible.

## **ANNEXURES**

### **ANNEXURE A: Guidelines for healthy eating**

The Guidelines for healthy eating for South Africa provide information on the foods that must be included in a healthy eating plan. These guidelines are the basis for family meals; the needs of children under 5 are met through adapting the family menu.

#### **Guidelines for healthy eating for adults and children over the age of 5:**

- ✓ Enjoy a variety of foods.
- ✓ Drink lots of clean, safe water
- ✓ Make starchy foods part of most meals
- ✓ Eat plenty of vegetables and fruit
- ✓ Eat dry beans, split peas, lentils and soya regularly
- ✓ Fish, chicken, lean meat or eggs can be eaten every day
- ✓ Have milk, maas or yoghurt every day
- ✓ Use fat sparingly; choose vegetable oils rather than hard fats
- ✓ Use salt and food high in salt sparingly
- ✓ Use sugar and food and drinks high in sugar sparingly
- ✓ Be active!

## ANNEXURE B: Recipes

### Week1: Day 1

#### Breakfast

<b>SOFT MEALIE MEAL PORRIDGE</b>								
<b>Portion size</b> 3 - 5 years: 250ml 1 - 3 years: 125ml 7 - 12 months: 125ml								
<b>Ingredients</b>	<b>10 portions</b>		<b>25 portions</b>		<b>50 portions</b>		<b>100 portions</b>	
	As purchased	As prepared	As purchased	As prepared	As purchased	As prepared	As purchased	As prepared
Mealie meal	250g	-	750g	-	1kg and 625g	-	3kg and 250ml	-
Water	750ml	-	1L and 875ml	-	3L and 750ML	-	7L and 500ml	-
<b>Method</b>								
<ol style="list-style-type: none"> <li>1. Mix mealie meal with a little cold water to make a paste.</li> <li>2. Bring rest of water to the boil in a pot.</li> <li>3. Stir mealie meal paste into boiling water.</li> <li>4. Simmer until cooked, 45 – 60 minutes.</li> <li>5. Serve.</li> </ol>								

**Lunch**

<b>CHICKEN STEW</b>								
<b>Portion size</b> 1 – 5 years: 40 g cooked 7 – 12 months: 40 g cooked								
<b>Ingredients</b>	<b>10 portions</b>		<b>25 portions</b>		<b>50 portions</b>		<b>100 portions</b>	
	As purchased	As prepared	As purchased	As prepared	As purchased	As prepared	As purchased	As prepared
Chickens, whole, with giblets	800 g	-	2 000 g (2 kg)	-	4 000 g (4 kg)	-	8 000 g (8 kg)	-
Oil	-	50 ml	-	125 ml	-	250 ml	-	500 ml
Onions	140 g	120 g	350 g	300 g	675 g	600 g	1 400 g	1 200 g
Potatoes	600 g	500 g	1 500 g	1 200 g	3 000g	2 500 g	6 000 g	5 000g
Carrots	200 g	170 g	500 g	425 g	1 000 g	850 g	2 000 g	1 700 g
Green beans	200 g	180 g	500 g	450 g	1 000 g	900 g	2 000 g	1 800 g
Soup, cream of chicken	-	30 g / ½ pkt	-	60 g / 1 pkt	-	120 g / 2 pkts	-	240 g / 4 pkts
<b>Method</b>								
<ol style="list-style-type: none"> <li>1. Remove giblets from chickens, place aside.</li> <li>2. Clean chickens and remove excess fat.</li> <li>3. Place chickens in a pot with just enough water to cover, bring to boil and cook until meat is cooked.</li> <li>4. Drain chickens, reserve cooking water. Cool chickens.</li> <li>5. Prepare vegetables; peel and chop onion, peel and slice potato, peel and chop carrots, top and tail and chop green beans.</li> <li>6. Remove meat from chickens and cut big pieces smaller.</li> <li>7. Add oil to pot and heat, add onion and brown.</li> <li>8. Add other vegetables and prepared chicken and simmer.</li> <li>9. While chicken is cooking clean giblets and chop / mince them. Cook in a small pan, then add to the chicken stew.</li> <li>10. Mix soup with cold water, add to the chicken and simmer for 5 minutes.</li> </ol>								



<b>RICE</b>								
<b>Portion size</b> 1- 5 years: 65g 7 - 12 months: 40g								
<b>Ingredients</b>	<b>10 portions</b>		<b>25 portions</b>		<b>50 portions</b>		<b>100 portions</b>	
	purchased	As prepared	purchased	As prepared	purchased	As prepared	purchased	As prepared
Cooking oil	5 ml		12.5ml		25ml		50ml	
Rice	250g		625g		1kg and 250g		2kg and 500g	
Salt (optional)	5ml		12.5ml		25ml		50 ml	
<b>Method</b>								
<ol style="list-style-type: none"> <li>1. In a saucepan with a good fitting lid bring water, salt and butter if desired to a boil.</li> <li>2. Add rice and stir.</li> <li>3. Cover and reduce heat to medium low. You will know that your temperature is correct if a little steam is visible leaking from the lid. A lot of steam means your heat is too high.</li> <li>4. Cook for 20 minutes.</li> <li>5. DO NOT LIFT LID!</li> <li>6. Remove from heat and fluff with fork.</li> <li>7. Serve!</li> </ol>								

<b>SWEET POTATOES</b>								
<b>Portion size</b> 3 - 5 years: 70g 1 - 3 years: 60g 7 - 12 months: 30-60g								
<b>Ingredients</b>	<b>10 portions</b>		<b>25 portions</b>		<b>50 portions</b>		<b>100 portions</b>	
	As purchased	As prepared	As purchased	As prepared	As purchased	As prepared	As purchased	As prepared
Sweet potatoes	500g		1.55kg	-	3.5kg	-	7 kg	-
Cooking oil	30 ml		62.5ml	-	125 ml	-	250ml	-
<b>Method</b>								
<ol style="list-style-type: none"> <li>1. Peel and wash as near to cooking time as possible</li> <li>2. Place peeled, cubed sweet potatoes in boiling water, just to cover,</li> <li>3. Add cooking oil, replace lid and cook for 25 minutes, or until just tender.</li> <li>4. Mash together.</li> <li>5. Serve</li> </ol>								

**Week 1: Day 2**

**Beakfast :**

<b>MALTABELLA PORRIDGE</b>								
<b>Portion size</b> 3 - 5 years: 250ml 1 - 3 years: 125ml 7 - 12 months: 125ml								
<b>Ingredients</b>	<b>10 portions</b>		<b>25 portions</b>		<b>50 portions</b>		<b>100 portions</b>	
	As purchased	As prepared	As purchased	As prepared	As purchased	As prepared	As purchased	As prepared
Porridge	250g		625g		1kg and 250g		2kg and 500g	
Water	750 ml		1L and 875ml	-	3L and 750ML	-	7L and 500ml	-
salt	5ml		12.5ml		25ml		50ml	
<b>Method</b>								
<ol style="list-style-type: none"> <li>1. Mix porridge with a little cold water to make a paste.</li> <li>2. Bring rest of water to the boil in a pot.</li> <li>3. Stir porridge paste into boiling water.</li> <li>4. Simmer on low heat for one hour.</li> <li>5. Serve.</li> </ol>								

**Mid – morning Snack**

<b>SCRAMBLED EGG</b>								
<b>Portion size</b> 9 – 23 month :1 teaspoon 24 months – 6 months:2 teaspoons								
<b>Ingredients</b>	<b>10 portions</b>		<b>25 portions</b>		<b>50 portions</b>		<b>100 portions</b>	
	purchased	As prepared	purchased	As prepared	purchased	As prepared	purchased	As prepared
Eggs	4(large)		6 (large )		12 (large)		24	
Milk	20 ml		45ml		90ml		180ml	
Salt	1.25g		3g		6g		12g	
Oil	10 ml		25ml		50 ml		100ml	
Heavy cream	10 ml		25g		50g		100g	
chopped fresh chives or parsley ( optional)	10 g		25g		50g		100g	
<b>Method</b>								
<ol style="list-style-type: none"> <li>1. Crack eggs into a medium bowl. Add milk and salt; whisk until combined.</li> <li>2. Heat oil in a large skillet over medium heat just until it's hot, swirling the pan to coat the bottom and sides.</li> <li>3.Add eggs and cook, stirring slowly but continuously, until they just begin to thicken, about 1/2 minutes (30 seconds)</li> <li>4. Begin vigorously stirring the eggs with a flat-edged wooden spatula, scraping the bottom of the skillet as you go.</li> <li>5. When eggs are just barely cooked through, after another 1 to 1/2 minutes or so, remove the skillet from the heat.</li> <li>6. Quickly stir in heavy cream to stop the cooking.</li> <li>7. Transfer eggs to 2 plates, top with chives and serve.</li> </ol>								

**Lunch:**

<b>SAVOURY SAMP AND BEANS</b>								
<b>Portion size</b> 4 – 5 years: 300 g 1 – 3 years: 200 g								
<b>Ingredients</b>	<b>10 portions</b>		<b>25 portions</b>		<b>50 portions</b>		<b>100 portions</b>	
	As purchased	As prepared	As purchased	As prepared	As purchased	As prepared	As purchased	As prepared
Samp	600 g		1 500 g		3 000 g		6 000 g	
Beans, dry	200 g		500 g		1 000 g		2 000 g	
Oil		40 ml		100 ml		200 ml		400 ml
Onion	300 g	270 g	750 g	675 g	1 500 g	1 350 g	3 000g	2 700 g
Garlic	3 cloves		6 cloves		1 bulb		2 bulb	
Tomatoes	400 g	380 g	1 000 g	950 g	2 000 g	1 900 g	4 000 g	3 800 g
Chicken spice		20 ml		50 ml		100 ml		100 ml
<b>Method</b>								

***Nutrition Guidelines for Early Childhood Development Centres***

1. Cover samp with water, set aside to soak overnight.
2. Cover beans with water, set aside to soak overnight.
3. In the morning drain beans and place in a pot with water, bring to the boil.  
Allow to boil for 20 minutes.
4. Drain samp. Drain beans.
5. Combine samp and beans and water and boil until tender (do not add salt).
6. Drain.
7. Heat oil in a pan.
8. Chop onions, garlic, and tomatoes.
9. Add onions to the oil and cook until brown, add garlic and cook until it just starts to turn brown, add tomatoes.  
Cook for 5 minutes.
10. Stir seasoning and salt into onion mixture and add this to the samp and beans.
11. Heat through and serve.

<b>COOKED CARROTS</b>								
<b>Portion size</b> 3 - 5 years: 200g 1 - 3 years: 150g 7 - 12 months: 150g-50g								
<b>Ingredients</b>	<b>10 portions</b>		<b>25 portions</b>		<b>50 portions</b>		<b>100 portions</b>	
	As purchased		As purchased	As prepared	As purchased	As prepared	As purchased	As prepared
Fresh carrots	500g		1.55 kg	-	3.5kg	-	7 kg	-
Cooking oil	30 ml		62.5 ml	-	125 ml	-	250ml	-
Sugar	27g		83 g		166g		332g	
<b>Method</b>								
<ol style="list-style-type: none"> <li>1. Wash and scrape carrots as near to cooking time as possible</li> <li>2. Place peeled, sliced carrots in boiling water, just to cover the base of the pot,</li> <li>3. Add cooking oil, replace lid and cook for 10 minutes, or until tender.</li> <li>4. Serve</li> </ol>								

**Week 1: Day 3**

**Breakfast : Maize meal porridge ; Refer to week 1 day 1**

<b>SPAGHETTI</b>								
<b>Portion size</b> 4 – 5 years: 300 g 1 – 3 years: 200 g								
<b>Ingredients</b>	<b>10 portions</b>		<b>25 portions</b>		<b>50 portions</b>		<b>100 portions</b>	
	As purchased	As prepared	As purchased	As prepared	As purchased	As prepared	As purchased	As
Spaghetti	1kg		2.5kg		5kg		10kg	
Cooking oil	30ml		75ml		150ml		300 ml	
Water	250ml		625 ml		1L and 250ml		2L and 500ml	
Salt to taste	2g		5g		10g		20g	
<b>Method</b>								
<ol style="list-style-type: none"> <li>1. Add water into the pot, bring to boil</li> <li>2. Add cooking oil, then spaghetti</li> <li>3. Bring to boil for 10 minutes and let simmer for 10 minutes</li> <li>4. Serve.</li> </ol>								



**Lunch**

<b>GREEN BEANS WITH POTATO</b>									
<b>Portion size</b> 1- 5 years: 40g 7 – 12 months: 40g									
<b>Ingredients</b>	<b>10 portions</b>		<b>25 portions</b>		<b>50 portions</b>		<b>100 portions</b>		
	As purchased	As prepared	As purchased	As prepared	As purchased	As prepared	As purchased	As prepared	
Potatoes	100 g	90 g	250 g	230 g	500 g	460 g	1 000 g	920 g	
Onions	25 g	20 g	60 g	50 g	120 g	100 g	240 g	200 g	
Green beans	280 g	2 60 g	700 g	650 g	1 400 g	1 300 g	2 800 g	2 600 g	
Margarine, yellow, brick	-	25 g	-	60 g	-	120 g	-	240 g	
<b>Method</b>									
<ol style="list-style-type: none"> <li>1. Bring a pot with a little water to the boil.</li> <li>2. Wash, peel and dice potatoes.</li> <li>3. Peel and dice onions.</li> <li>4. Wash top, tail and slice green beans.</li> <li>5. Add potatoes and onion to the water and bring to the boil.</li> <li>6. Boil potato and onion mixture for 5 minutes.</li> <li>7. Add green beans to potato and onions, and bring to boil.</li> <li>8. Cook until just tender, then drain.</li> <li>9. Add margarine to the vegetable mix and stir.</li> <li>10. Serve.</li> </ol>									

**Week 1: Day 4**

**Breakfast : Maltabella porridge; Refer to week 1 day 2**

**Lunch**

<b>SAVOURY MINCE</b>								
<b>Portion size</b> 3 - 5 years: 100g 1 - 3 years:100- 50g 7 - 12 months: 50g								
<b>Ingredients</b>	<b>10 portions</b>		<b>25 portions</b>		<b>50 portions</b>		<b>100 portions</b>	
	As purchased	As prepared	As purchased	As prepared	As purchased	As prepared	As purchased	As prepared
Onions	60g		130g		260g		520g	
Cooking oil	6ml		13ml		26ml		52ml	
Mince	400g		1kg		2kg		4kg	
Water	119ml		298ml		596ml		1L and 192ml	
Salt	3g		7.5g				30g	
<b>Method</b>								
<ol style="list-style-type: none"> <li>1. Peel and finely chop onions</li> <li>2. Heat cooking oil in pot, add onions and Fry</li> <li>3. Add mince to onions and fry</li> <li>4. Once browned, add curry and salt to taste, add water and simmer for 20minutes.</li> <li>5. Serve</li> </ol>								

<b>BEETROOT SALAD</b>								
<b>Portion size</b> 1- 5 years: 40g 7 – 12 months: 20g								
<b>Ingredient</b>	<b>10 portions</b>		<b>25 portions</b>		<b>50 portions</b>		<b>100 portions</b>	
	As purchased	As prepared	As purchased	As prepared	As purchased	As prepared	As purchased	As prepared
Beetroot	500 g		1 250 g		2 500g		5 000 g	
Water	-	20 ml	-	40 ml	-	80ml	-	160 ml
Vinegar, white	-	40 ml	-	100 ml	-	200ml	-	400 ml
Sugar	-	40 g	-	100 g	-	200g	-	400 g
Salt	-	2 ml	-	5 ml	-	10ml	-	20 ml
<b>Method</b>								
<ol style="list-style-type: none"> <li>1. Prepare beetroot by slicing off leaves and long root, but leaving a 1cm stub of each.</li> <li>2. Place in pot and boil until tender.</li> <li>3. Peel and grate or slice.</li> <li>4. Mix other ingredients with beetroot.</li> <li>5. Chill.</li> </ol>								

**Nutrition Guidelines for Early Childhood Development Centres**

<b>PAP</b>								
<b>Portion size</b> 3 - 5 years: 300g 1 - 3 years: 250g 7 - 12 months: 150g-200g								
<b>Ingredients</b>	<b>10 portions</b>		<b>25 portions</b>		<b>50 portions</b>		<b>100 portions</b>	
	As purchased		As purchased	As prepared	As purchased	As prepared	As purchased	As prepared
Maize meal	720g		1kg and 800g	-	3kg and 600g	-	7 kg and 200g	-
Water	1L		2.5L	-	5L	-	10L	-
<b>Method</b>								
<ol style="list-style-type: none"> <li>1. Bring water to boil in a pot</li> <li>2. add maize meal</li> <li>3. Stir thoroughly until smooth and cover with a lid</li> <li>4. Reduce heat and simmer for 35 minutes</li> <li>5. Stir occasionally</li> <li>6. Serve</li> </ol>								

**Week 1: Day 5**

**Breakfast**

<b>SOFT OATS PORRIDGE</b>									
<b>Portion size</b> 3 - 5 years: 250ml 1 - 3 years: 125ml 7 - 12 months: 125ml									
<b>Ingredients</b>	<b>10 portions</b>		<b>25 portions</b>		<b>50 portions</b>		<b>100 portions</b>		
	AS purchased	AS prepared	AS purchased	AS prepared	AS purchased	AS prepared	AS purchased	AS prepared	
Mealie meal	250g		625g		1kg and 250g		2kg and 500g		
Water	750 ml		1L and 875ml		3L and 750ML		7L and 500ml		
<b>Method</b>									
<ol style="list-style-type: none"> <li>1. Bring water to the boil in a pot.</li> <li>2. Stir oats into the boiling water.</li> <li>3. Simmer until cooked, on low heat for one hour.</li> <li>4. Serve.</li> </ol>									

## MASHED POTATOES

### **Portion Size** *Guidelines for Early Childhood Development Centres*

1- 5 years: 80 g

7 – 12 months: 40 g

Ingredients	10 portions		25 portions		50 portions		100 portions	
	As purchased	As prepared	As purchased	As prepared	As purchased	As prepared	As purchased	As prepared
Potatoes, for boiling.	1 200 g	1 000 g	3 000g	2 500g	6 000 g (6 kg)	5 000 g	12 000 g (12 kg)	10 000 g
Milk.	-	100 ml	-	250ml	-	500 ml	-	1 000 ml
Water, drained from potatoes, if needed.		100 ml	-	250ml	-	500 ml	-	1 000 ml

### **Method**

1. Bring water in pot to boil.
2. Wash and peel potatoes, cut into quarters.
3. Add potatoes to boiling water, and cook until tender.
4. Drain water from potatoes, keeping some aside for if needed in mashing.
5. Add milk to potatoes, and mash.
6. Add extra water if needed and mash till consistency is even.
7. Serve.

<b>COOKED CABBAGE</b>								
<b>Portion size</b> 1 – 5 years: 80 g 7 – 12 months: 40 g								
<b>Ingredients</b>	<b>10 portions</b>		<b>25 portions</b>		<b>50 portions</b>		<b>100 portions</b>	
	purchased As	prepared As	purchased As	prepared As	purchased As	prepared As	purchased As	prepared As
Cabbage	970g		2425kg		4850kg		9 700g	
Cooking oil	24ml		60ml		120ml		240ml	
Salt	5g		12.5g		25g		50g	
Water	50ml		125ml		250ml		500ml	
<b>Method</b>								
<p>1.Shred the cabbage and put in a pot. Simmer in little water until soft</p> <p>2.Add cooking oil and braise the cabbage.</p> <p>3.Add salt to cabbage and mix lightly</p> <p>4.Serve</p>								

**Week 2: Day 1**

**Breakfast : Maize Meal porridge ; Refer to week 1 day 1**

**Lunch**

**BOLO CUBE BEEF STEW**

**Portion size**

1 - 5 years: 60 g cooked  
7 - 12 months: 40 g cooked

Ingredients	10 portions		25 portions		50 portions		100 portions	
	As purchased	As prepared	As purchased	As prepared	As purchased	As prepared	As purchased	As prepared
Onions	50g		125g		250g		500g	
Potatoes	90g		245g		490g		980g	
Cooking oil	18ml		45ml		90ml		180ml	
Topside cubes	155g		388g		776g		1kg and 552g	
Salt	2g		5g		10g		20g	
Water	36ml		72ml		144ml		288ml	
Tomatoes	50g		125g		250g		500g	

**Method**

1. Peel vegetables and chop coarsely,
2. Heat the oil in a steam pot
3. Add beef cubes to heated oil and fry
4. Add onions, potatoes and tomatoes, fry and stir occasionally
5. Add water to the meat mixture and bring to boil.
6. Simmer until nearly tender: 20 min
7. Serve

**Pap : Refer to week 1 day 4**

COOKED CABAGE				
				<b>Portion size</b>
				1 - 5 years: 80 g
				7 - 12 months: 40 g
10 portions	25 portions	50 portions	100 portions	Ingredients



**Nutrition Guidelines for Early Childhood Development Centres**

As purchased	As prepared	As purchased	As prepared	As purchased	As prepared	As purchased	As prepared	
970g		2425kg		4850kg		9 700g		Cabbage
24ml		60ml		120ml		240ml		Cooking oil
5g		12.5g		25g		50g		Salt
50ml		125ml		250ml		500ml		Water

**Method**

- 1.Shred the cabbage and put in a pot. Simmer in little water until soft
- 2.Add cooking oil and braise the cabbage.
- 3.Add salt to cabbage and mix lightly
- 4.Serve

**Week 2: Day 2**

**Breakfast :Maltabella porridge; Refer to week 1 day 2**

<b>LENTIL STEW</b>								
<b>Portion size</b> Depends of volume of water added								
<b>Ingredient s</b>	<b>10 portions</b>		<b>25 portions</b>		<b>50 portions</b>		<b>100 portions</b>	
	As purchased	As prepared	As purchased	As prepared	As purchased	As prepared	As purchased	As prepared
Lentils	200 g				1 000 g			
Onion	300 g	270 g	750 g	675 g	1 500 g	1 350 g	3 000 g	2 700 g
Carrots	200 g	150 g	500 g	425 g	1 000 g	850 g	2 000 g	1 700 g
Garlic	6 cloves		1 bulb		2 bulbs		4 bulbs	
Water	½ cup		2 cups		3 cups		6 cups	
Cumin	10 ml		25 ml		50 ml		60 ml	
Tomato paste	50 g		100 g		250 g		5 00 g	
Tomatoes (fresh or tinned)	200 g		1 250 g		1 000 g		2 000 g	

**Nutrition Guidelines for Early Childhood Development Centres**

Sugar	15 ml		40 ml		80 ml		100 ml	
Soup, tomato	60 g / 1 packet		120 g / 2 pkts		180 g / 3 pkts		600 g / 6 pkts	

**Method**

1. Cover lentils with hot water, and leave to soak while preparing other ingredients.
2. Peel and chop onion, peel and grate carrot, peel and crush garlic. Combine with water and cook over medium heat until onion is soft.
3. Stir in the cumin and cook for 1 – 2 minutes, stirring all the time.
4. Add tomato paste and continue to stir for 1 – 2 minutes.
5. Add chopped tomatoes.
6. Drain lentils and add to soup mix and add enough water to cover.
7. Simmer for about 20 – 30 minutes, or until lentils are cooked.
8. Mix soup powder with a little cold water; pour into the lentil mix, stirring all the time. Simmer for 3 minutes.
9. Add extra hot water if needed.

<b>PUMPKIN</b>									
<b>Portion size</b> 1- 5 years: 40g 7 – 12 months: 40g									
<b>10 portions</b>		<b>25 portions</b>		<b>50 portions</b>		<b>100 portions</b>		<b>Ingredients</b>	
As purchased	As prepared	As purchased	As prepared	As purchased	As prepared	As purchased	As prepared		
700g	460 g	1 750 g	1 150 g	3 500g	2 300 g	7 000 g	4 600 g	Butternut	

**Nutrition Guidelines for Early Childhood Development Centres**

		63 ml	-	156 ml	-	312ml	-	624ml	Cooking oil
		1 ml	-	3 ml		5ml		10 ml	Cinnamon, fine (optional)

**Method**

1. Bring small amount of water to boil in pot.
2. Wash butternut, peel, remove seeds, and slice into blocks (20x20x20mm).
3. Add butternut to pot and bring to boil, the water must only just cover the butternut.
4. Cook until just tender.
5. Drain.
6. Add margarine to the butternut and stir.
7. Optional: sprinkle cinnamon on mix and stir OR sprinkle on portions for older children.
8. Serve

**Week 2: Day 3**

**Breakfast : Maize Meal porridge ; Refer to week 1 day 1**

**Lunch**

<b>MASHED POTATOES</b>								
<b>Portion size</b> 1- 5 years: 80 g 7 – 12 months: 40 g								
<b>Ingredients</b>	<b>10 portions</b>		<b>25 portions</b>		<b>50 portions</b>		<b>100 portions</b>	
	As purchased	As prepared	As purchased	As prepared	As purchased	As prepared	As purchased	As prepared
Potatoes, for boiling.	1 200 g	1 000 g	3 000g	2 500g	6 000 g (6 kg)	5 000 g	12 000 g (12 kg)	10 000 g
Milk.	-	100 ml	-	250ml	-	500 ml	-	1 000 ml

**Nutrition Guidelines for Early Childhood Development Centres**

Water, drained from potatoes, if needed.		100 ml	-	250ml	-	500 ml	-	1 000 ml
<b>Method</b>								
<ol style="list-style-type: none"> <li>1. Bring water in pot to boil.</li> <li>2. Wash and peel potatoes, cut into quarters.</li> <li>3. Add potatoes to boiling water, and cook until tender.</li> <li>4. Drain water from potatoes, keeping some aside for if needed in mashing.</li> <li>5. Add milk to potatoes, and mash.</li> <li>6. Add extra water if needed and mash till consistency is even.</li> <li>7. Serve.</li> </ol>								

<b>BEEF AND SOYA MINCE STEW</b>								
<b>Portion size</b>								
1 – 5 years: 80 g								
7 – 12 months: 40 g								
<b>Ingredients</b>	<b>10 portions</b>		<b>25 portions</b>		<b>50 portions</b>		<b>100 portions</b>	
	As purchased	As prepared	As purchased	As prepared	As purchased	As prepared	As purchased	As prepared
Soya mince, beef / savoury	180g		450 g		900 g		1 800 g	-
Water (amount according to manufacturer directions.								
Oil	-	20 ml	-	50 ml	-	100 ml		200 ml
Beef mince	500 g		1 250 g	-	2 500 g	-	5 000 g	-
<b>Method</b>								

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1. Place soya mince in a pot and cover with water.
2. Gently heat and bring to simmer, stir now and then, and cook for 20 minutes.
3. Heat oil in a pot.
4. Add mince and brown, cook for 15 minutes.
5. Add soya mince and cook together for 15 minutes, stir every 5 minutes.
6. Add extra water if needed to keep moist, but not runny.

<b>CUCUMBER AND TOMATO SLICES</b>								
<b>Portion size</b> 2 - 5 years: 60g								
<b>Ingredients</b>	<b>10 portions</b>		<b>25 portions</b>		<b>50 portions</b>		<b>100 portions</b>	
	As purchased	As prepared	As purchased	As prepared	As purchased	As prepared	As purchased	As prepared
Tomatoes	600 g	480 g	1 500g	1 200g	3 000 g	2 400 g	6 000 g	4 800 g
Cucumber	-	50 g	-	125 g	-	250 g	-	500 g
Orange juice, pure	-	25 ml	-	60 ml	-	125 ml	-	250 ml
<b>Method</b>								

1. Wash and slice cucumber and tomatoes,
2. Place in mixing bowl.
3. Mix cucumber and tomatoes pour the orange juice over. OR Add salt to taste
4. Chill until served.

**Week 2: Day 4**

**Breakfast :Maltabella porridge; Refer to week 1 day 2**

**Lunch:**

<b>SAVOURY SAMP AND BEANS</b>									
<b>Portion size</b> 4 – 5 years: 300 g 1 – 3 years: 200 g									
<b>Ingredients</b>	<b>10 portions</b>		<b>25 portions</b>		<b>50 portions</b>		<b>100 portions</b>		
	As purchased	As prepared	As purchased	As prepared	As purchased	As prepared	As purchased	As prepared	
Samp	600 g		1 500 g		3 000 g		6 000 g		
Beans, dry	200 g		500 g		1 000 g		2 000 g		
Oil		40 ml		100 ml		200 ml		400 ml	
Onion	300 g	270 g	750 g	675 g	1 500 g	1 350 g	3 000g	2 700 g	
Garlic	3 cloves		6 cloves		1 bulb		2 bulb		
Tomatoes	400 g	380 g	1 000 g	950 g	2 000 g	1 900 g	4 000 g	3 800 g	
Chicken spice		20 ml		50 ml		100 ml		100 ml	
<b>Method</b>									

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1. Cover samp with water, set aside to soak overnight.
2. Cover beans with water, set aside to soak overnight.
3. In the morning drain beans and place in a pot with water, bring to the boil.  
Allow to boil for 20 minutes.
4. Drain samp. Drain beans.
5. Combine samp and beans and water and boil until tender (do not add salt).
6. Drain.
7. Heat oil in a pan.
8. Chop onions, garlic, and tomatoes.
9. Add onions to the oil and cook until brown, add garlic and cook until it just starts to turn brown, add tomatoes.  
Cook for 5 minutes.
10. Stir seasoning and salt into onion mixture and add this to the samp and beans.
11. Heat through and serve.

**Morogo /spinach : Refer to week 1 day 4.**



**Week 2: Day 5**

**Breakfast : Oats porridge ; Refer to week 1 day 5**

**Lunch:**

<b>MACARONI AND CHEESE</b>								
<b>Portion size</b> 4 – 5 years: 300 g 1 – 3 years: 200 g								
<b>Ingredients</b>	<b>10 portions</b>		<b>25 portions</b>		<b>50 portions</b>		<b>100 portions</b>	
	As purchased	As prepared	As purchased	As prepared	As purchased	As prepared	As purchased	As prepared
Macaroni	224g		560g		1120g		2240	
Flour	27g		68g		135g		270g	
Oil	120 ml		300ml		600ml		1L and 200ml	
Salt	2.5 g		6.5g		13g		26g	
Milk	480ml		1L and 200ml		2L and 400ml		4L and 800ml	
Shredded cheddar cheese	180 g		450g		900g		1kg and 800g	
Water	200ml		500ml		1L		2L	
<b>Method</b>								
<ol style="list-style-type: none"> <li>1. Cook the macaroni in salted water until tender.</li> <li>2. In medium saucepan, add oil, heat in medium heat;</li> <li>3. Stir in flour, salt and slowly add milk.</li> <li>4. Cook and stir until bubbly.</li> <li>5. Stir in cheese until melted.</li> <li>6. Drain macaroni; add to cheese sauce; stir to coat.</li> <li>7. Serve.</li> </ol>								

**Cooked carrots: Refer to week 1 day 2**

## **ANNEXURE C: Keeping Food Safe**

### **1. Keep clean:**

#### *Personal hygiene*

- Wash your hands after going to the toilet or changing a baby's nappy.
- Wash your hands before preparing food and before feeding children.
- If children hold some food in their hands, also wash their hands.

#### *Environmental hygiene*

- Wash all surfaces and equipment used for food preparation.
- Protect kitchen areas and food from insects, pests and animals.

#### *Prevent bacteria from spreading*

- Keep raw and cooked food separate to stop germs from spreading from raw to cooked food
- Wash equipment and utensils used for raw food before they are used for cooked food.

### **2. Cook food thoroughly so that germs are killed**

- Cook food thoroughly; especially meat, fish, eggs and chicken as this will destroy germs.
- Bring food like soup and stew to boiling stage to make sure they are hot enough to kill all the germs.
- If food that was previously cooked is being served, make sure it is heated very well to kill germs that have multiplied after it was cooked

### **3. Keep food at safe temperatures to slow the growth of germs**

- Do not leave cooked food at room temperature for more than two hours
- Keep cooked food hot before you serve it
- Store leftover food in a refrigerator or fridge
- Do not store food for longer than recommended, even in a refrigerator. Refrigerated, cooked food should be discarded after 72 hours.

### **4. Use safe water and foods to stop germs and chemicals from entering the home**

- Use safe water, or treat it to make it safe.
- Wash vegetables and fruit, especially if they are to be eaten raw
- Do not use processed food after the expiry date

## **ANNEXURE D: Equipment**

### **Small equipment needed**

Measuring equipment (the size will be dependent on the number of meals served)

- Measuring spoons
- Measuring cups
- Measuring jugs
- Scale

### **Items for food preparation and serving**

- Chopping board (preferably a separate one to be used only for raw meat/chicken)
- Suitable sharp knives
- Vegetable peeler
- Grater
- Stirring spoons
- Serving spoons
- Mixing bowls
- Pots, suitable size for number of meals.
- Additional equipment will be required if food is also prepared for children under 12 months of age e.g. potato masher, sieve, electric blender (for puree).
- Serving bowls/plates
- Eating cutlery (e.g. teaspoons, tablespoons)

### **Large scale equipment**

- Cooker; at least two rings, more if complementary foods are also prepared.
- Refrigerator.
- Freezer if regular shopping cannot be done.
- Food mincing machine, if complementary foods are to be prepared.

## **ANNEXURE E: Cleaning and sterilising feeding and preparation equipment**

It is very important that all equipments used for feeding infants and for preparing feeds be thoroughly cleaned and sterilizes before use.

- 1 Hands should always be washed thoroughly with soap and water before cleaning and sterilizing feeding and preparation equipments (as described below).In case settings, a dedicated hand –washing sink is recommended
2. Cleaning: washing feeding and preparation equipment (e.g. cups, bottle, teats and spoon) thoroughly in hot soapy water. Where feeding bottles are used, clean bottle and teat brushes should be used to scrub inside and outside of bottle and teats to ensure that all remaining feeds is removed.
3. After washing feeding and preparation equipment, rinse thoroughly in safe water.
4. Sterilizing: if using a commercial sterilizer, follow manufacture’s instruction. Feeding and preparation equipments can also be sterilised by boiling:
  - a. fill a large pan with water and completely submerge all washed feeding and preparing equipment ensuring that are no trapped air bubbles
  - b. cover the pan with a lid and bring to a rolling boil, making sure the pan does not boil dry; and
  - c. keep the pan covered until the feeding and preparation equipment is needed.
5. Hands should be washed thoroughly with a soap and water before removing feeding and preparation equipment from a sterilizer or pan. The use of sterilizer forceps for handling sterilized feeding and preparation equipment is recommended.
6. To prevent recontamination, it is best to remove feeding and preparation equipment just before it is required for use. If equipment is removed from the sterilizer and not used immediately, it should be covered and stored in a clean place. Feeding bottles can be fully assembled to prevent the inside of sterilized bottle and the inside and outside of the teat from becoming contaminated.

**ANNEXURE F: Monitoring tool for nutrition and Food Service  
in Early Childhood Development Centres  
(To be adapted locally as needed)**

Province \_\_\_\_\_

Date \_\_\_\_\_

Name of ECD \_\_\_\_\_

Contact Person \_\_\_\_\_

Physical

Address \_\_\_\_\_

Reported by \_\_\_\_\_

PHYSICAL FACILITY	COMPLIANCE		
	Yes	No	Comments
Separate area used for food preparation			
Access to food preparation area limited to the food service workers			
Hand washing facility available			
Soap available for washing hands			
Rubbish removed and disposed of in best way			

KITCHEN STAFF	COMPLIANCE		
	Yes	No	Comments
Staff fully trained in all aspects of work			
Staff have appropriate overalls / aprons			

HYGIENE: FACILITY, STORAGE, EQUIPMENT, PERSONAL	COMPLIANCE		
	Yes	No	Comments
Adequate pest control			
Food preparation area and wash up area clean			
Cleaning cloths washed and disinfected daily			
Cooking equipment, crockery and cutlery cleaned after each meal or snack			
Storage areas cleaned according to schedule			

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Dry goods stored as recommended			
Cold and frozen goods stores as recommended			
<b>Personal hygiene</b>			
Staff wearing correct clothing			
Staff not wearing jewellery			
Staff nails clean and short, no polish or artificial nails			

NUTRITION	COMPLIANCE		
	Yes	No	Comments
Expressed breastmilk (EBM) is handled and stored appropriately			
Infant formula is prepared and used according to SOP			
Cup feeding is practiced (instead of bottle feeding)			
There is a menu cycle and it is adhered to			
Food safety and good hygiene is practiced			
The ECD centre has established linkages with the PHC team			
Children have space to play and are encouraged to be active (i.e. there is play time)			

**Recommendations and follow-ups for the ECD centre:**

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## REFERENCES

American Dietetic Association. 2004. Position of the American Dietetic Association: **Dietary guidance for healthy children ages 2 – 11 years**. Journal of the American Dietetic Association 104: 660 – 677.

American Dietetic Association. 2011. Position of the American Dietetic Association. **Benchmarks for Nutrition in Child Care**. Journal of the American Dietetic Association 111: 607- 615.

Anon. 2006. Eat smart North Carolina: **Guidelines for healthy foods and beverages at meetings, gatherings and events**.  
[www.EatSmartMoveMoreNC.com](http://www.EatSmartMoveMoreNC.com)

Atmore A, van Niekerk L, Ashley-Cooper M. 2013. **Challenges facing the early childhood**.

Development sector in South Africa. **A Comprehensive Research report on Early Childhood Development to the National Development Agency (NDA)**.

Australian Government. 2009. **Get up and grow. Healthy eating and physical activity for early childhood**. Commonwealth of Australia.

Australian Government. Department of Health and Aging. 2009. **Get up and grow. Healthy eating and physical activity for early childhood**.

Bahita R. 2013. **Operational guidance on menu planning. Home Grown School Feeding**. Partnership for child development.

Biersteker L. 2010. Scaling-up early child development in South Africa. **Introducing a reception year (grade R) for children aged five years as the first year of schooling**.

Wolfensohn centre for development. Working paper 17.

Bourne L. 2013. **Food hygiene and sanitation in infants and young children: a paediatric food based dietary guideline**. SA Jnl Clin Nutr 26(3) (supplement): S156 – S164.

***Nutrition Guidelines for Early Childhood Development Centres***

Crawley H. 2006. **Eating well for under-fives in child care. Practical and nutritional guidelines.** The Caroline Walker Trust. Second Edition.

Crawley H. 2007. **Eating well: children and adults with learning disabilities.** The Caroline Walker Trust. First edition.

Delisle HF, et al. 2013. **Pilot project of the nutrition friendly school initiative in Ouagadougou, Burkino Faso and Cononou, Benin, West Africa.** Global Health Promotion 20(1): 39 – 49.

Department of National Education. 1978. **Foods and cookery.** Home Economics Section, First metricated edition. The Government Printer.

Hawes H, Scotchmer C. 1993. **Children for health.** The Child to Child Trust in association with UNICEF.

Kader A et al. Undated. **Storing fresh fruit and vegetables for better taste.** Postharvest technology research and information centre. University of California, Davis.

Keating SM, Fookes BG. 1976. **Cooking is fun.** Juta and company, Johannesburg.

South Africa Sugar Association. Undated. **Brochure on oral health.**

West BB, Wood L, Harger VF, Shugart GS. 1986. **Food service in institutions.** Macmillan Publishing Company, New York.

World Health Organisation 2006. **Five keys to safer food manual.** Department of Food Safety, Zoonoses and Food Borne Diseases.

World Health Organization 2006. **Food and nutrition policy for schools. A tool for the development of school nutrition programmes for the European Region.** Programme for Nutrition and Food Security, WHO Regional Office for Europe, Copenhagen.

World Health Organization. 2009. **Infant and young child feeding. Model chapter for textbooks for medical students and allied health professionals.**

World Health Organization. 2012. **Combined course on growth assessment and IYCF counselling.**