

FOOD SERVICE MANAGEMENT AND ADMINISTRATION

Volume 3

FOOD RATION SCALES FOR HOSPITALS AND HEALTH INSTITUTIONS

**Compiled by
Working Group HMC Sub-committee for Nutrition Services
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1 INTRODUCTION

The ration scales have been drawn up according to the principles applied to, and for the daily nutritional requirements of healthy people as recommended by the Food and Nutrition Board of the USA (1989) and the South African Food-based Dietary Guidelines. The ration scales do not apply to people with specific nutritional requirements. The ration scales use substitutes to provide for different eating patterns.

In practice, it would mean more administrative work if quantities have to be determined according to a ration scale for each age group. For these guidelines, **adults** are classified as all persons, male and female, who are seven years of age and older, **children** (child) refers to a person between four and six years of age, a **toddler** for a person between one and three years of age and a **baby** for between four and twelve months of age. The reason seven-year-olds (*and older*) are considered to be adults, is that, when served portions of meat, vegetables and fruit it does not differ much from those of older groups. The range for bread and cereals, allows for differences in energy needs.

Compiling the ration scales, allowance was made for the fact that it is not always possible to be accurate in bulk food production. The scales are therefore not minimum scales, but rather guidelines for budgeting purposes.

2 INTERPRETATION OF THE RATION SCALE

2.1 Purpose of ration scales

- Ration scales make it possible to cater in bulk for groups of clients on a scientific basis. The use of ration scales facilitates:
 - meeting the recommended daily energy and nutritional requirements of a specific group of clients with a balanced diet.
 - providing food within the limits of a budget.
 - providing an orderly, well-organised food service.

2.2 Definition of a ration scale

- A ration scale is a list of foods, flavourings and drinks expressed in quantities as purchased per person per day and/or per week.
- Food that is used in small quantities or that cannot be indicated in fractions, such as dried legumes and eggs may be given in quantities per week.
- A ration scale may indicate quantities for specific meals or snacks instead of quantities per week.

2.3 Food budget

- Providing food for a large group of clients must be within the limits of a budget. The financial means of the clients and the policy of the institution determine the amount of money made available for buying the food. The selection of luxury food items should be influenced by funds available.

2.4 Food services

- The use of ration scales simplifies food service. This means that the work processes carried out in a food service unit are facilitated since the quantity of food to be used is specified, as is the meal plan. The menu is compiled in accordance with the predetermined meal plan. The use of standardised recipes means that the total quantity of the various types of foods required can be determined.

2.5 Conversion of energy and nutritional requirements into food

2.5.1 Edible form of food

- The energy and nutrient intake of a client depends on the type and quantity of food he eats. Therefore the quantity of food that is indicated in the ration scale must be based on how much of the food is actually edible. Edible portions relate particularly to foods such as meat, fish, vegetables and fruit. Rations for meat, when indicated as carcasses, sides or quarters will then be greater than when meat is indicated as cuts, with or without bone. Rations for vegetables with leaves, peel and pips will also be greater than when only the edible parts of fruit and vegetables are indicated. Where canned food is indicated in a ration scale, the quantity of fluid in which the contents are packed must be considered.
- Information concerning food-processing losses can be found in publications such as Food yields, summarized by different stages of preparation. *Agricultural Handbook No.1023*, or in standardised recipes.

2.5.2 Edible yield of food

- The edible yield of food is affected by the following, among other things:
 - Raw food - processing such as peeling, cutting up, shredding, and grating and mincing contributes to losses.
 - Cooked food - methods of cooking, for example steaming, boiling, baking, frying and roasting.
 - Handling - for example some food is left in containers and equipment after cooking and/or serving and this decreases the yield.
- During preparation and serving there are gradual losses that cannot be determined in exact quantities. A ration scale must therefore make provision for these unknown losses and allow for them in terms of total energy. An allowance of about 10% is recommended for processing losses. The spread of processing losses among the various food items is determined by the processing method that entails the greatest hidden loss.

2.5.3 Number of clients

- The individuals in any group of clients will differ in body size and level of activity, and therefore in energy needs. The larger the number of clients, the less these differences will affect the energy needs of the group as a whole. The converse is also true. In practice, food ration scales often over provide for large groups and undershoot the mark when it comes to smaller numbers. To allow for this tendency, a sliding scale may be used when drawing up a ration scale. When calculating a ration scale for less than 50 people, the following sliding scale may be used:

- 10 - 15 people: 20 - 25% extra
- 16 - 25 people: 15 - 20% extra
- 26 - 35 people: 10 - 15% extra
- 36 - 50 people: 5 - 10% extra

2.6 Food substitutes

- In the conversion of theoretical estimates of energy and nutritional requirements into food, the first choice is always the simplest, most generally available form of food, for example fresh milk, meat, fish, cereals, vegetables and fruit. A ration scale is therefore drawn up to indicate, in the first place, quantities of unprocessed food types. However, the ration scale must provide for a variety of circumstances so that it can be adapted to suit specific clients. For greater flexibility in the implementation of the ration scale, substitutes are indicated for the processed form of fresh food. For each food type, a quantity of its processed form is given as an alternative, whether for the dried, canned, frozen or de-boned form of the food. The weight or volume of the substitute is usually based on an acceptable portion size. The nutritional value of the substitute should also be kept in mind.

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Meat/poultry/fish Raw, without bone <i>OR</i> Raw with bone	100 - 200g 150 - 250g	A portion of meat/poultry/fish is equivalent to the purchase weight of the meat/poultry/fish as shown in <i>(Section 3.3)*</i> 100g meat without bone may be replaced with one of the following combinations of TVP (texturised vegetable protein), or dried legumes, and meat: 10g TVP (dry) + 90g meat-raw, with bone 10g TVP (dry) + 70g meat-raw, without bone 12,5g TVP (dry) + 50g meat-raw, without bone 30g TVP (frozen) + 90g meat-raw, with bone 50g TVP (frozen) + 50g meat-raw, without bone 15g legumes + 90g meat-raw, with bone 15g legumes + 70g meat-raw, without bone
Fruit Fresh, as purchased	1 portion <i>(100 - 200g)</i>	A portion of fresh fruit in season is equivalent to the purchase weight of one of type of fruit <i>(Section 3.3)*</i> 150ml fruit juice/nectar may replace a portion of fresh fruit once a week or 40% real juice, not a dairy blend Fruit juice powder 30g
ITEM	WEEKLY ALLOWANCE PER PATIENT	PORTION SIZE
Dried legumes/TVP <i>(dry/ frozen)</i>	60 - 100g	The quantities for various uses per portion are as follows: Dried legumes in soup/dishes 30 - 45g Dried legumes or TVP combined with meat 10 - 15g
Eggs	3 1	One egg is a portion and is equal to one of the following: Frozen scrambled-egg mixture 50g Egg powder 13g Egg to be used for cooking purposes
Cheese	60 - 80g 20g	The quantities for different uses are as follows: Cheese on its own: Cheese 25g Meatless dish <i>(main course for light meal)</i> : Cheese 15 - 20g Cheese to be used for cooking purposes
Ice-cream Sorbet <i>(optional)</i>	75g	A portion ice-cream is: 125ml
Sandwich spreads Peanut butter Meat/vegetable spread Other spreads	15 - 45g 10g 15g	

**(Section 3.3): Interpretation of the ration scale, provides information about the use of the ration scale for adults. For patients in psychiatric hospitals or patients with tuberculosis the bread ration may be increased to 280g per day, and the margarine ration may then be increased by 5g for every extra slice of bread served.*

3.2 KITCHEN COMMODITIES FOR ADULT PERSONS

ITEM	WEEKLY PER 100 PERSONS	BASIS FOR SUBSTITUTIONS
Vinegar	700ml	
Baking powder	300g	20g baking powder = 5g bicarbonate of soda + 10g cream of tartar
Chutney	700 ml/g	100 ml chutney = 100 ml/g tomato sauce OR 100 ml/g Worcester sauce
Flavouring	70 ml	
Jelly powder	1.4kg	100g jelly powder = 10g gelatine OR 100g dessert powder
Curry powder/Masala	170g	
Colouring and browning	20ml	
Cake flour	10,5kg	100g cake flour = 50g maize meal OR 70g Sago OR 50g custard powder

Mageu	25 litres	200-250ml Mageu may be given to each person once a week	
Cool drink syrup/squash	2 litres once a week		
Cream	2 litre	100ml cream	= 100ml artificial cream
Mustard powder	30g	10 g mustard powder	= 30g pre-prepared mustard
Pepper	140g		
herbs and spices	250g	1g of any herb or spice	= 1g of a suitable flavouring powder
Salt	4kg		
Tomato puree	1.4kg/litre	100g/ml tomato puree	= 50g/ml tomato paste OR 500 g/ml canned tomatoes
Tomato sauce	1,4kg/litre	100g/ml tomato sauce	= 100g/ml Worcester sauce OR 100g/ml mayonnaise OR 100g/ml chutney
Meat extract cubes powder	2kg	100g meat extract	= 100g sauce powder/soup powder OR 2,5 litre meat stock (<i>made up</i>)
Soup powder	48x 5 litre packets	One 5 litre packet	= 25 to 30 portions of soup (170 to 200 ml per portion)

3.3 INTERPRETATION OF THE RATION SCALE FOR ADULTS

3.3.1 DAILY ALLOWANCES: FULL NORMAL DIET

3.3.1.1 Brown, Whole-wheat Bread: Ration per Person: 150 - 210g

(i) Patients in Psychiatric Hospitals

Cereals	100g
Brown Bread	280g
Beans	60g
Potatoes	170g
Milk	500ml

(ii) Patients' in Tuberculosis Hospitals: Ration per Person 280g

- This ration is based on 5-6 slices per day. A standard loaf will provide 21–25 slices. Bread is served at breakfast and supper. Patients seldom eat more than 2 slices with a meal. The extra slice of bread can be served with the late night drink. The period between supper and breakfast is long, and patients sometimes complain about feeling hungry at night.

3.3.1.2 Dry Cereals: Ration per Person: 90 - 150g

- These include porridge meal, dry cereals, pastas, rice, maize rice and samp.

(i) Breakfast: Ration per person: 30 - 50g

- A portion of breakfast cereal, dry weight, is equivalent to the following:

Brown/whole-wheat bread	35 - 40g
Corn-flakes	30g
Oats	30g
Grain sorghum	30g
Maize-meal	
<i>Soft porridge</i>	40g
<i>Thick porridge</i>	50g

- Dry breakfast cereals are more expensive than soft porridges. Therefore it is advisable to serve dry cereals once per week or during emergencies.

(The cultural eating habits of the people in the area must be taken into account)

(ii) Light or main meal: Ration per person: 60 -100g.

- A portion of starch, dry weight, is equivalent to one of the following:

Rice/maize rice/pasta	30g
Samp/crushed wheat	40g
Maize-meal: thick porridge	50g

- A portion of starch is also equivalent to a portion of the following starchy vegetables:

Potato/sweet potato	120 - 140g (<i>purchase weight</i>)
"Sousboontjies"/baked beans	100g
Sweet corn, canned or frozen	100g

- Usually when potatoes or other starchy vegetables are used as the starch at one meal, rice or another grain will be the starch at the second meal.

3.3.1.3 Vegetables - Fresh As Purchased

(i) Potatoes/sweet potatoes: Ration per person: 170g

- There are 6-8 potatoes per kilogram, depending on their size. When menus are drawn up, baked beans, "sousboontjies" and sweet-corn may be used as vegetables or starch substitutes for potatoes or cereals such as rice, samp, maize rice and pastas. Baked beans can be used as a protein-rich dish for breakfast or a light meal. A portion of potato/sweet potato, or other starchy vegetable as purchased, is equivalent to the following:

STARCHY VEGETABLE	SIZE OF SERVED PORTION *	PURCHASE WEIGHT	NUMBER OF PORTIONS AS PURCHASED PER kg
POTATOES			
Fresh, Whole	100g	120 - 140g	7 - 8
Fresh, diced	100g	120 - 140g	7 - 8
Fresh, mashed	110g	125g	8
Dehydrated	100g	23g	43
SWEET POTATOES			
Fresh	100 - 120g	150 - 170g	6
Dehydrated	100g	28g	36
SOUSBOONTJIES/ BAKED BEANS			
Canned	100g	100g	
SWEET-CORN			
Canned, creamed	100g	100g	
Frozen, cut corn	100g	100g	10
DRIED BEANS, PEAS, LENTILS			
	100g cooked	40g raw	25

* For patients in psychiatric hospitals or patients with tuberculosis the size of the served portion of potatoes may be increased to 170g per person. The portion size of other starchy vegetables may be increased accordingly.

- Potatoes may be used in a stew as an extender. The purchase weight of potatoes as an extender in stew is: 40 - 50g (*210g per week*)
- The following weights can be used for calculating the purchase weights of canned vegetables in A10 cans. These weights represent the net weight (Drained weight, choice grade) of the various vegetables.

STARCHY VEGETABLE	PORTIONS PER CAN
Baked beans in tomato sauce	3,06kg = 30 x 100g portions per A10 can
Sweet-corn, creamed	3,09kg = 31 x 100g portions per A10 can
	420g = 4 x 100g portions per 420g can

(ii) Other vegetables: Ration per person: 300 - 400g

- This allows for two cooked vegetables and one salad to be served daily.
- A portion of vegetables is equivalent to the purchase weight of one of the following vegetables:

VEGETABLES	SIZE OF SERVED PORTION*	PURCHASE WEIGHT	NUMBER OF PORTIONS PURCHASED (kg)
BABY MARROW			
Fresh	65 - 80g	70 - 85g	13 - 14
Frozen	65 - 80g	65 - 80g	11 - 13
Pre- prepared	65g	70g	13
BEETROOT			
Fresh Canned	65 - 80g	110 - 160g	6 - 9
Pre- prepared	65 - 80g	75 - 90g	12 - 15
	65g	70g	13
BROCCOLI			
Fresh	65 - 80g	120 - 150g	7 - 8
Canned	65 - 80g	65 - 80g	12 - 15
Pre- prepared	65g	70g	13
BUTTERNUT	<i>(without skin)</i>		
Fresh	90 - 100g	110 - 130g	8 - 9
Pre- prepared	90g	100g	8
CABBAGE			
Fresh, cooked	65 - 80g	100 - 120g	8 - 10
Fresh, salad	45 - 65g	70 - 100g	10 - 14
Dehydrated	65 - 80g	10 - 12g	80 - 100
Pre- prepared	65g	100g	8
CARROTS			
Fresh, with tops	65 - 80g	120 - 150g	6 - 8
Fresh, without tops	65 - 80g	85 - 105g	9 - 12
Salad	65g	85 g	12
Frozen	65 - 80g	65 - 80g	12 - 15
Dehydrated	65 - 80g	11 - 13g	86 - 90
Pre- prepared	70g	100g	7
CAULIFLOWER			
Fresh	65 - 80g	120 - 150g	7 - 8
Frozen	65 - 80g	65 - 80g	12 - 15
Dehydrated	65 - 80g	10 - 12g	80 - 100
Pre- prepared	70g	100g	8
CUCUMBER			
Fresh, ordinary	50 - 55g	60 - 65g	13 - 16
English	50 - 55g	50 - 55g	13 - 16
GEM SQUASH	<i>(with skin)</i>		
Fresh	90 - 100g	180g	6
Pre- prepared	100g	120g	8
GREEN BEANS			
Fresh	65 - 80g	75 - 90g	11 - 13
Frozen	65 - 80g	65 - 80g	12 - 15
Canned	65 - 80g	120 - 150g	
Dehydrated	65 - 80g	10 - 12g	80 - 100
Pre- prepared	70g	80g	12

GREEN PEAS			
Frozen	45 - 65g	45 - 65g	15 - 22
Canned	45 - 65g	70 - 100g	
Dehydrated	45 - 65g	14 - 20g	50 - 70
GREEN PEPPER			
Fresh, medium, rings	6g	8g	125
Fresh, medium, whole	According to dish	120g	8
HUBBARD SQUASH			
Fresh	90 - 100g	140 - 150g	7
Pre- prepared	90g	100g	8
LETTUCE	According to dish	8 - 10g (1 leaf)	100
MIXED VEGETABLES			
Frozen	65 - 80g	65 - 80g	12 - 15
Canned	65 - 80g	120 - 150g	
MOROGO			
Dehydrate	65 - 80g	13 - 16g	60 - 75
ONIONS			
Fresh, medium	According to dish	100g purchased = 85g peeled	10
Dehydrated	According to dish	13g dehydrated = 56g dehydrated	
Pre- prepared	According to dish	85g	10
PUMPKIN			
Fresh	90 - 100g	160 - 180g	6
Pre- prepared	90g	100g	10
SPINACH			
Fresh	65 - 80g (without stalks)	140 - 170g	6 - 7
Fresh, cooked	65 - 80g (end of stalks cut off)	95 - 115g	8 - 10
Dehydrated	65 - 80g		
Pre- prepared	80g	13 - 16g 100g	60 - 75 10
TOMATOES			
Salad	50 - 80g	55 - 85g	13 - 18
Canned	According to dish	According to dish	

*For patients in psychiatric hospitals or patients with tuberculosis the size of the served portion of vegetables may be increased to 100g.

Frozen vegetables shrinkage is insignificant during cooking or steaming

- The following weights can be used for calculating the purchase weights of canned vegetables in A10 cans. These weights represent the net weight (*drained weight, choice grade*) of the various vegetables:

CANNED VEGETABLES	PORTIONS PER A10 CAN
Beetroot	1,86kg = 28 x 65g
Mixed vegetables	1,86kg = 28 x 65g
Green beans	1,64kg = 25 x 65g
Green peas	1,96kg = 30 x 65g
Tomato and onion, braised	3,00kg = 46 x 65g
Tomatoes, whole and peeled	1,82kg = 28 x 65g
Carrots	1,82kg = 28 x 65g

3.3.1.4 Coffee/Tea: Ration per Person: 9 - 15g (*dry weight*)

- A portion is one cup and is equivalent to one of the following:

Coffee	2,5g
Tea	1,5g
Rooibos tea, (loose)	1,5g

One tea bag (2,5 g) is sufficient for 2 cups of tea

It is more economical to use ground coffee and loose tea.

3.3.1.5 Jam: Ration per Person: 30 - 40g (25 - 30ml)

- This is for spreading on bread at breakfast and supper. Patients usually eat one slice of bread with their main dish or soup and the second slice with jam or syrup.

3.3.1.6 Margarine/Cooking Oil: Ration per Person: 25 - 50 g/ml

- Margarine is used for spreading bread. One teaspoon is 5g and is enough to spread one slice of bread thinly.
- The oil is used for food preparation, e.g. fried dishes.
- If 30g margarine is used for spreading bread, then only 20ml oil and/or salad dressing or margarine can be used with salads or for cooking purposes. Restrict fried foods.

3.3.1.7 Milk

(i) **Fresh: Ration per person: 400ml**

- Milk is used for as listed in table (*Example of milk distribution*):

Early morning tea or coffee	30 - 40ml
Breakfast porridge	80 - 100ml
Breakfast tea or coffee	30 - 40ml
Mid-morning tea or coffee	30 - 40ml
Lunch tea or coffee	30 - 40ml
Afternoon tea or coffee	30 - 40ml
Supper tea or coffee	30 - 40ml
Late-night tea or coffee	30 - 40ml

- 2% (*Low fat*) milk can be used instead of full cream milk, if cheaper, or fresh full-cream milk may be partly substituted with skim-milk powder on the basis of 100ml 10g skim-milk powder, or full-cream milk may be mixed on a half and half basis.
- Some hospitals use full-cream-milk powder instead of fresh full-cream milk. For full cream milk powder, follow directions on the package.
- Although the price of milk per litre is sometimes lower when milk is bought in bulk than when one-litre bags, bottles or cartons are used, it is usually easier to ration the one-litre containers. Therefore the total milk consumption could be lower when milk is bought in litres instead of in bulk.

(ii) **Milk ration for pregnant women and lactating mothers**

- For these women the daily milk ration can be increased as follows:

Pregnant woman	650ml
Lactating mothers	650 - 900ml

(iii) **Skim-milk powder: Ration per person: 10g (100ml reconstituted)**

- The skim-milk powder can be used for custard, white sauces, puddings and dishes, e.g. macaroni-and-cheese. Use 100-g skim-milk powder to make one litre skim milk.
(***This ration remains the same for pregnant and lactating women***)

3.3.1.8 Sugar: Ration per Person: 60 - 100g

- Example of sugar distribution:

SUGAR IS USED FOR	VOLUME
Early morning tea or coffee	2 teaspoons 10g
Breakfast porridge	2 teaspoons 10g
Breakfast tea or coffee	2 teaspoons 10g
Midmorning tea or coffee	2 teaspoons 10g
Lunch tea or coffee	2 teaspoons 10g
Afternoon tea or coffee	2 teaspoons 10g
Supper tea or coffee	2 teaspoons 10g
Late-night tea or coffee	2 teaspoons 10g
TOTAL	80g

The rest of the sugar may be used for cooking purposes.

3.3.1.9 Meat/Poultry/Fish

(i) Raw, without bone: Ration per person: 100 - 200g
OR

(ii) Raw, with bone: Ration per person: 150 - 250g

- Portion sizes for meat, fish and poultry:

TYPE OF MEAT	SIZE OF SERVED PORTIONS	PURCHASE WEIGHT	NUMBER OF PORTION PER kg
MEAT WITHOUT BONE			
Mince meat, lean	70g	100g	10
Pot or oven Roast	70g	120-150g	6 - 8
beef, mutton or pork	70g	100-110g	9 - 10
<i>Stewing meat</i>			
Beef, mutton or pork	70g	120g	8
Steak	70g	100g	10
Sausage	70g	120g	8
Liver or other organ meat	70g	120g	8
MEAT WITH BONE			
Leg, mutton or pork	70g	150g	7
Chops, mutton or pork	100g (2 chops) 75g (1 chop)	150g	7
Chuck	100g	150g	7
Forequarter	100g	150g	7
PROCESSED MEAT			
Polony, Vienna	80g	80g	12
FISH (Frozen, without batter)			
Haddock fillets, with skin			
Hake fillets, without skin	80-100g	100-120g	8 - 10
Hake portions, without skin	80-100g 2 x 40g	100-120g 2 x 70g	8 - 10 7
POULTRY			
Chicken breast	100g	150g	6 - 7
Chicken thigh	100g	150g	6 - 7
Turkey	100g	150g	6 - 7

(iii) Guidelines for uniform menus

- In order to ensure uniformity in respect of menus, the following guide show how many times per week protein rich food/dishes may be repeated. The guidelines fit in with the ration scales and include breakfasts, lunches and suppers:

TYPE OF FOOD	NUMBER OF SERVINGS PER WEEK
Eggs (<i>boiled, fried, scrambled, or poached</i>)	3
Sausage	2
Fish	3
Poultry	3
Minced meat	3
Roast (<i>e.g. roast chicken</i>)	1
Meatless dish (<i>e.g. cheese dish</i>)	2 - 3
Stewing beef	3
TOTAL	21 Meals

- Meat, especially minced meat, can be extended with TVP (*textured vegetable protein*) or dried legumes in the amounts as shown on the ratio scale.
- Roasts may be alternate or replaced with stews.
- Polony or processed cold meats can be served in summer in place of stews.

3.3.1.10 Fruit: Ration per Person: 100 - 200g/day

- The ration scale allows one portion of fruit per person per day.
- Portion sizes for fruit:

FRUIT	SIZE OF SERVED PORTION	PURCHASE WEIGHT	NUMBER OF PORTIONS PER kg
APPLES Fresh, medium	1	140 - 150g	6 - 7
APRICOTS Fresh, medium	2 x 35g	70g	14
BANANAS Fresh, medium	1	150 - 180g	5 - 8
GRAPEFRUIT	1 half	150g	7
GRAPES	1 bunch = 100g	120g	8
GUAVAS Fresh, small Medium	2 x 50g 1 x 85g	100g 85 - 100g	10 10 - 12
ORANGES Fresh, medium	1	140 - 150g	6 - 7
PEACHES Fresh, medium	1	115g	8 - 9
PEARS Fresh, medium	1	140 - 150g	6 - 7
PINEAPPLES Fresh, peeled	100 - 110g	200g	5
PLUMS Fresh, medium	2 x 50 - 60g	100 - 120g	8 - 10
SPANSPEK Fresh, peeled	100g	200g	5
WATERMELON Fresh, peeled	90 - 100g	200g	5
PURE FRUIT JUICE OR FRUIT NECTAR	150 ml ready to drink Refer to the instructions on the label for the correct dilution		

- Fresh fruit may be substituted with canned fruit occasionally, but not more than once per week. The following weights can be used for calculating the purchase weight of canned fruit in A10 packs. These weights represent the net weight (*drained weight, choice grade*) of the various types of fruit:

CANNED FRUIT		PORTIONS PER A10 TIN	SIZE OF SERVED PORTION
Apricot	halves	1,82kg = 115 -130 halves	2 x 35g = 70g
Apple	pie	2,84kg = 28 x 100g portions	100g
Guavas	halves	1,65kg = 27 - 40 halves	2 x 50g = 100g
Pears	halves	1,75kg = 30 - 38 halves	2 x 50g = 100g
Peaches	halves	1,82kg = 34 - 36 halves	2 x 50g = 100g
	slices	1,82kg = 120 -135 slices	6-7 slices
Pineapple	diced	1,82kg = 115 -130 halves	125 ml = 90 - 100g
	rings	1,87kg = 29 x 65g rings	1 - 2 rings

3.3.2 WEEKLY ALLOWANCES

(i) *Dried Legumes/TVP (Dry): Ration er Person: 60 - 100g*

- The quantities per portion for various uses are as follows:
 - Dried legumes in soup/dishes 30 - 45g
 - Combined with meat 10 - 15g
- TVP (*texture vegetable protein*) is used with minced meat dishes as a meat extender (*see ration scale item 9*).

(ii) *Eggs: Ration per Person: 3 - 4*

- Eggs are to be served 3 times per week at breakfast. One egg is a portion and is equal to one of the following:
 - Frozen scrambled egg mixture 50g
 - Egg powder 13g
- One egg for cooking purposes

(iii) *Cheese: Ration per Person: 60 - 80g*

- The quantities for different uses are as follows:
 - Cheese on its own (for breakfast) 25g
 - Meatless dish (main course for light meal) 15 - 20g

(iv) *Sandwich Spreads*

- The quantities allowed are as follows:
 - Peanut butter 15g
 - Meat/vegetable spread 10g

3.3.3 KITCHEN COMMODITIES FOR ADULT PER PERSON

The quantities of food used to make dishes, sauces, etc. are indicated under item 3.2

3.4 EXAMPLE OF THE NUTRIENT ANALYSIS OF PRUDENT DIET FOR ADULT (MALE)

SUBJECT INFORMATION	STATISTICS
Date	31/08/2000
Type	Daily
Reference	Feeding
Sex	Male
Age	25
Weight	79kg
Height	1.76m
BM Index	25.5

MEAL CONSTITUENTS	
Bread/rolls, brown	210g
Oats, rolled or oat-meal, cooked	50g
Samp and beans, 1:1	100g
Potato, cooked with butter	140g
Pumpkin/squash, summer CKD + HM	400g
Tea, brewed	800g
Marmalade	40g
Margarine, hard/brick	30g
Milk, whole fresh, also UHT/longlife	500g
Suger, white granulated	80g
Beef, bolo/topside, braised (lean)	200g
Apple, raw with skin	200g
Lentils, split cooked	100g
Egg, boiled	61g
Cheese, medium fat/reduced fat	80g

MACRO NUTRIENTS	AMOUNT	RDA	%
Moisture (%)	78.50%		
Energy (kJ)	12 073kJ	12 134	99.50%
Total Protein (g)	151.10g	63.00	239.84%
Plant Protein (g)	38.40g		
Animal Protein (g)	112.70g		
Total Fat (g)	107.70g		
Saturated Fat (g)	40.22g		
Mono-unsaturated Fat (g)	42.03g		
Poly-unsaturated Fat (g)	14.22g		
Total trans Fatty Acids (g)	7.12g		
Fat Ratio (poly/sat)	0.35		
Cholesterol (mg)	566.00mg		
Total Carbohydrates (g)	324.40g		
Fibre (g)	35.90g		
Added Sugar (g)	105.20g		
Total CHO-Sugar (g)	203.00g		
Alcohol (g)	00.00g		
Energy – Protein (%)			20.901%
Energy – Fat (%)			33.631%
Energy – Carbohydrates (%)			49.839%
Energy – Alcohol (%)			00.000%

PRUDENT DIET RECOMMENDATIONS

Energy from Total Fat is ABOVE the recommended 30% maximum
Energy from Saturated Fat is ABOVE the recommended 10% maximum
Energy from Poly-unsaturated Fat is BELOW the recommended 10% minimum
Energy from Carbohydrates is BELOW the recommended 50% minimum
Cholesterol intake EXCEEDS the recommended 300mg maximum per day
Fibre intake is ABOVE the recommended 20g minimum per day

WHO RECOMMENDATIONS (% of Recommended Value)

Energy (kJ)	113.88%	of	10 601
Protein (g)	255.02%	of	59.25
Vitamin A (ug)	118.80%	of	750.00
Vitamin D (ug)	305.60%	of	2.50
Thiamin (mg)	119.17%	of	1.20
Riboflavin (mg)	139.44%	of	1.80
Niacin (mg)	100.51%	of	19.80
Folic Acid (ug)	263.00%	of	200.00
Vitamin B12 (ug)	460.00%	of	2.00
Vitamin C (mg)	166.67%	of	30.00
Calcium (mg)	401.50%	of	400.00
Iron (mg)	396.00%	of	5.00

MINERALS	AMOUNT	RDA	%
Calcium (mg)	1 606.00	800.00	200.75%
Iron (mg)	19.80	10.00	198.00%
Magnesium (mg)	527.00	350.00	150.57%
Phosphorus (mg)	2 498.00	800.00	312.25%
Potassium (mg)	4 270.00	* 2 000.00	213.50%
Sodium (mg)	2 878.00	** 3 000.00	95.93%
Zink (mg)	23.05	15.00	153.67%
Copper (mg)	1.98	*** 2.20	90.00%
Manganese (mg)	4.64	*** 3.50	132.57%

* Estimated minimum requirement

** This is not a RDA, but a dietary guideline

*** Estimated safe and adequate daily dietary intake (value is the mean of the range)

VITAMINS	AMOUNT	RDA	%
Vitamin A (RE) (ug)	891	1 000.00	89.10%
Thiamin (B1) (mg)	1.43	1.50	95.33%
Riboflavin (B2) (mg)	2.51	1.70	147.65%
Niacin (mg)	19.90	19.00	104.74%
Vitamin B6 (mg)	2.236	2.00	111.80%
Folic Acid (ug)	526.00	200.00	263.00%
Vitamin B12 (ug)	9.20	2.00	460.00%
Vitamin C (mg)	50.00	60.00	83.33%
Panto-acid (mg)	6.56	*** 5.50	119.27%
Biotin (ug)	34.40	*** 65.00	52.92%
Vitamin D (ug)	7.64	5.00	152.80%
Vitamin E (mg)	11.70	10.00	117.00%

* Estimated safe and adequate daily dietary intake (value is the mean of the range)

FATTY ACID COMPOSITION	AMOUNT
C4 : 0 (g)	0.930
C6 : 0 (g)	0.490
C8 : 0 (g)	0.300
C10 : 0 (g)	0.640
C12 : 0 (g)	0.940
C14 : 0 (g)	4.410
C16 : 0 (g)	21.960
C18 : 0 (g)	9.400
C20 : 0 (g)	0.170
C22 : 0 (g)	0.110
C24 : 0 (g)	0.030
C14 : 1 (g)	0.200
C16 : 1 (g)	1.840
C18 : 1 (g)	39.540
C20 : 1 (g)	0.110
C22 : 1 (g)	0.000
C18 : 2 (g)	13.030
C18 : 3 (g)	1.050
C18 : 4 (g)	0.000
C20 : 3 (g)	0.000
C20 : 4 (g)	0.160
C20 : 5 (g)	0.020
C22 : 5 (g)	0.000
C22 : 6 (g)	0.040

ESSENTIAL AMINO ACIDS	AMOUNT
Isoleucine (g)	7.201
Leucine (g)	12.274
Lysine (g)	10.898
Methionine (g)	3.505
Phenylalanine (g)	6.752
Threonine (g)	5.961
Tryptophan (g)	1.879
Valine (g)	8.030
Arginine (g)	8.102
Histidine (g)	4.607

4 FOOD RATION SCALE FOR CHILDREN 6 - 12 YEARS

4.1 DAILY AND WEEKLY ALLOWANCE PER PATIENT (*CHILDREN 6 – 12 YEARS*)

ITEM	DAILY ALLOWANCE PER PATIENT SERVING	PORTION SIZE
Brown/Whole-wheat bread	120 - 175g	A portion of bread is equivalent to one slice (<i>35 - 40g</i>) and is equivalent to the following: Biscuits/Rusk's 30g Crackers 30g Bread roll/bun 50g
Dry cereals <i>Breakfast</i>	60 - 120g 30 - 50g	A portion of breakfast cereal is equivalent to the following: Brown/Whole-wheat bread 30 - 40g Corn-flakes 30g Oats, dry 30g Grain sorghum, dry 30g Maize-meal, Dry <i>Soft porridge</i> 30g <i>Thick porridge</i> 50g
<i>Light or main meal</i>	30 - 70g	A portion of starch is equivalent to one of the following: Rice/maize-rice/pasta, dry 30g Samp/crushed wheat, dry 30g Maize-meal, dry: thick porridge 50g The starch may be replaced with a starchy vegetable, e.g. potatoes. (<i>Section 4.3</i>)
Vegetables - fresh as purchased Potatoes/sweet potatoes Other vegetables	90 - 100g 30g 180 - 280g	Potatoes to be used for cooking purposes (<i>Section 4.3</i>)* for portion sizes of potatoes and other vegetables as purchased
Tea (<i>preferably Rooibos tea</i>), cocoa	1,5 - 2,5g	A portion is one cup and is equivalent to one of the following: Rooibos tea 0,75g (<i>Maximum 2 cups per day</i>)
Jam	30 - 40g (<i>25 - 30ml</i>) 10g	A portion of jam is equivalent to one of the following: Jam, portioned 15g or 20g Un-portioned 15g (<i>12,5ml</i>) Honey/Syrup 15g Jam to be used for cooking purposes
Margarine	20g	A portion of margarine is 5g (<i>5ml</i>) is equivalent to one of the following: Cooking oil 5ml Mayonnaise/salad cream/salad dressing 5ml
Cooking oil	5 ml	Oil for cooking purposes
Milk full cream, fresh fresh, low fat	500ml	A portion of fresh, full cream milk is 200ml and is equivalent to one of the following: Evaporated milk 100ml Buttermilk 200ml Milk powder 20g Fresh full-cream milk may be replaced with milk with 2% fat (<i>low fat milk</i>)
Full-cream milk powder	5g	Full cream milk powder is used for cooking purposes

Sugar	30 - 40g 10g	A portion of sugar is equivalent to the following: Portioned 10g Un-portioned 5g Sugar for cooking purposes
Meat/poultry/fish Raw, without bone OR Raw with bone	100 - 120g 125 - 150g	A portion of meat/poultry/fish is equivalent to the purchase weight of the meat/poultry/fish (<i>Section 4.3</i>)* 60g meat without bone may be replaced with one of the following combinations of TVP (<i>texturised vegetable protein</i>), or dried legumes, and meat: 5g TVP (<i>dry</i>) + 45g meat-raw, with bone 5g TVP (<i>dry</i>) + 35g meat-raw, without bone 6,5g TVP (<i>dry</i>) + 25g meat-raw, without bone 15g TVP (<i>frozen</i>) + 45g meat-raw, with bone 25g TVP (<i>frozen</i>) + 25g meat-raw, without bone 7,5g legumes + 45g meat-raw, with bone 7,5g legumes + 35g meat-raw, without bone
Fruit Fresh, as purchased	1 portion (100 - 200g)	A portion of fresh fruit in season is equivalent to the purchase weight of one of type of fruit (<i>Section 4.3</i>)* 150ml fruit juice/nectar may replace a portion of fresh fruit once a week or 30g fruit juice powder.
ITEM	WEEKLY ALLOWANCE PER PATIENT SERVING	PORTION SIZE
Dried legumes/TVP (dry/frozen)	45 - 60g	The quantities for various uses per portion are as follows: Dried legumes in soup/dishes 30 - 45g Dried legumes or TVP combined with meat 5 - 10g
Eggs	3 1	One egg is a portion and is equal to one of the following: Frozen scrambled-egg mixture 50g Egg powder 13g Egg for cooking purposes
Cheese	25 - 30g 5g	The quantities for different uses are as follows: Cheese on its own: Cheese 15g Meatless dish (<i>main course for light meal</i>): Cheese 15g Cheese for cooking purposes
Ice cream/Sorbet	75g	A portion of ice-cream is: 125ml
Sandwich spreads Peanut butter Meat/vegetable spread	15g - 30g 5g	

* *Section 4.3: Interpretation of the ration scale provides information about the use of the ration scale for children 6-12 years.*

4.2 KITCHEN COMMODITIES FOR CHILDREN 6 - 12 YEARS

ITEM	WEEKLY PER 100 CHILDREN	BASIS FOR SUBSTITUTIONS
Vinegar	500ml	
Baking powder	225g	20g baking powder = 5g bicarbonate of soda + 10g cream of tartar
Chutney	500ml/g	100 ml chutney = 100ml/g tomato sauce OR 100ml/g Worcester sauce
Flavouring	50ml	
Jelly powder	1kg	100g jelly powder = 10g gelatine OR

		100g dessert powder
Curry powder/ Masala	125g	
Colouring and browning	15ml	
Cake flour	7,5kg	100g cake flour = 50g maize meal OR 70g Sago OR 50g custard powder
Fruit Juice/nectar concentrated	7,5 litre	
Mageu	25 litre	Once a week
Mustard powder	20g	10g mustard powder = 30g pre-prepared mustard
Cream	1,5 litre	100ml cream = 100ml artificial cream
Pepper	100g	
Herbs and spices	175g	1g of any herb or spice = 1g of a suitable flavouring powder
Salt	3kg	
Tomato puree	1kg/litre	100g/ml tomato puree = 50g/ml tomato paste OR 500g/ml canned tomatoes
Tomato sauce	1kg/litre	100g/ml tomato sauce = 100g/ml Worcester sauce OR 100g/ml mayonnaise
Meat extract cubes powder	1,5kg	100g meat extract = 100g sauce powder/soup powder OR 2,5 litre meat stock (<i>made up</i>)
Soup powder	24 x 5 litre packets	One 5 litre packet = 25 to 30 portions of soup (170 to 200ml per portion)

4.3 INTERPRETATION OF THE RATION SCALE FOR CHILDREN 6 - 12 YEARS

4.3.1 DAILY ALLOWANCES: FULL NORMAL DIET

4.3.1.1 Brown/Whole-wheat Bread: Ration per Child: 120 - 175g

- This ration is based on 3-4 slices of bread per day. A standard loaf will provide 21-25 slices. Bread is served at breakfast and supper. Children seldom eat more than 2 slices with a meal and for smaller children one slice will be sufficient.

4.3.1.2 Dry Cereals: Ration per Child: 60 - 120g

- These include porridge meal, dry cereals, pastas, rice, maize rice and samp.
- (i) **Breakfast: Ration per child: 30 - 50g**
- A portion of breakfast cereal, dry weight, is equivalent to the following:

Brown/whole-wheat bread	30-40g
Corn-flakes	30g
Oats	30g
Grain sorghum	30g
Maize-meal	
<i>Soft porridge</i>	30g
<i>Thick porridge</i>	50g

- Dry breakfast cereals are more expensive than soft porridges. To cut costs corn flakes are restricted to once per week, but may also be replaced entirely with soft porridge.
(*The cultural eating habits of the people in the area must be taken into account*)

(ii) **Light or main meal: Ration per child: 30 - 70g**

- A portion of starch, dry weight, is equivalent to one of the following:

Rice/maize rice/pasta	30g
Samp/crushed wheat	40g
Maize-meal: thick porridge	50g

- A portion of starch is also equivalent to a portion of the following starchy vegetables:

Potato/sweet potato	120 - 140 g (<i>purchase weight</i>)
"Sousboontjies"/baked beans	100 g
Sweet-corn, canned or frozen	100 g

- Usually when potatoes or other starchy vegetables are used as the starch at one meal, rice or another grain will be the starch at the second meal.

4.3.1.3 Vegetables - Fresh as Purchased

(i) Potatoes/sweet potatoes: Ration per child: 90 - 100g

- There are 6-8 potatoes per kilogram, depending on their size. When menus are drawn up, baked beans, "sousboontjies" and sweet-corn should not be regarded as vegetables, but can be used as substitutes for potatoes or cereals such as rice, samp, maize rice and pastas. Baked beans can be used as a protein-rich dish for breakfast or a light meal.
- A portion of potato/sweet potato, or other starchy vegetable as purchased, is equivalent to the following:

STARCHY VEGETABLE	SIZE OF SERVED PORTION *	PURCHASE WEIGHT	NUMBER OF PORTIONS PER kg
POTATOES			
Fresh, Whole	100g	120 - 140g	7 - 8
Fresh, diced	100g	120 - 140g	7 - 8
Fresh, mashed	110g	125g	8
Dehydrated	100g	23g	43
SWEET POTATOES			
Fresh	100 - 120g	150 - 170g	6
Dehydrated	100g	28g	36
SOUSBOONTJIES/ BAKED BEANS			
Canned	100g	100g	
SWEET - CORN			
Canned, creamed	100g	100g	
Frozen, cut corn	100g	100g	10
DRIED BEANS, PEAS, LENTILS	100g cooked	40g raw	25

- Potatoes may be used in a stew as an extender. The purchase weight of potatoes as an extender in stew is:
40 - 50g (*210 g per week*)
- The following weights can be used for calculating the purchase weights of canned vegetables in A10 cans. These weights represent the net weight (*drained weight, choice grade*) of the various vegetables:

STARCHY VEGETABLE	PORTIONS PER CAN
Baked beans in tomato sauce	3,06kg = 30 x 100 g portions per A10 can
Sweet-corn, creamed	3,09kg = 31 x 100 g portions per A10 can
	420 g = 4 x 100 g portions per 420g can

(ii) Other vegetables: Ration per child: 180 - 280g

- This allows for two cooked vegetables and one salad to be served daily.

- A portion of vegetables is equivalent to the purchase weight of one of the following vegetables:

VEGETABLES	SIZE OF SERVED PORTION *	PURCHASE WEIGHT	NUMBER OF PORTIONS AS PURCHASED PER kg
BABY MARROW Fresh Frozen Pre-prepared	45 - 60g 45 - 60g 45g	50 - 65g 55 - 60g 50g	14 - 15 12 - 14 14
BEETROOT Fresh Canned Pre-prepared	45 - 60g 45 - 60g 45g	90 - 140g 55 - 70g 60g	7 - 10 13 - 14 7
BROCCOLI Fresh Canned Pre-prepared	45 - 60g 45 - 60g 45g	100 - 130g 45 - 60g 70g	8 - 9 13 - 16 6
BUTTERNUT Fresh Pre-prepared	(without skin) 70 - 80g 70g	90 - 110g 90g	9 - 10 9
CABBAGE Fresh, cooked Fresh, salad Dehydrated Pre-prepared	45 - 60g 45 - 65g 45 - 60g 45g	80 - 100g 50 - 80g 10 - 12g 80g	10 - 12 12 - 15 80 - 100 10
CARROTS Fresh, with tops Fresh, without tops Salad Frozen Dehydrated Pre-prepared	45 - 60g 45 - 60g 45g 45 - 60g 45 - 60g 45g	100 - 130g 65 - 85g 65 g 45 - 60g 10 - 12g 75g	8 - 10 12 - 14 14 13 - 16 86 - 90 10
CAULIFLOWER Fresh Frozen Dehydrated Pre-prepared	45 - 60g 45 - 60g 45 - 65g 45g	100 - 130g 45 - 60g 10 - 12g 80g	8 - 9 14 - 16 80 - 100 9
CUCUMBER Fresh English	30 - 45g 30g	30 - 45g 30g	13 - 16 13
GEM SQUASH Fresh cooked Pre-prepared	(with skin) 70 - 80g 70g	160g 100g	7 7
GREEN BEANS Fresh Frozen Canned Dehydrated Pre-prepared	45 - 60g 45 - 60g 45 - 60g 45 - 60g 45g	55 - 70g 45 - 60g 100 - 130g 10 - 12g 55g	12 - 14 13 - 16 80 - 100 12
GREEN PEAS Frozen Canned Dehydrated	45 - 65g 45 - 65g 45 - 65g	45 - 65g 50 - 80g 12 - 18g	15 - 22 50 - 70

GREEN PEPPER Fresh, medium, rings Fresh, medium, whole	6g According to dish	8g 120g	125 8
HUBBARD SQUASH Fresh Pre-prepared	70 - 80g 70g	120 - 130g 90g	9 10
LETTUCE	According to dish	8 - 10g (<i>1 leaf</i>)	100
MIXED VEGETABLES Frozen Canned	45 - 60g 45 - 60g	45 - 60g 100 - 130g	12-15
MOROGO Dehydrate	45 - 60g	10 - 13g	60-75
ONIONS Fresh, medium Dehydrated Pre-prepared	According to dish According to dish According to dish	100g purchased = 85g peeled 13g dehydrated = 56g dehydrated 85g	10 10
PUMPKIN Fresh, cooked Pre-prepared	70-80g 70g	140 - 160g 90g	8 9
SPINACH Fresh, cooked Fresh, cooked Dehydrated Pre-prepared	45 - 60g (<i>without stalks</i>) 45-60g (<i>end of stalks cut off</i>) 45 - 60g 45g	120 - 150g 75 - 95g 10 - 14g 75g	7 - 9 10 - 12 60 - 75 10
TOMATOES Salad Canned	30 - 60g According to dish	55 - 85g According to dish	13 - 18

- The following weights can be used for calculating the purchase weights of canned vegetables in A10 cans. These weights represent the net weight (drained weight, choice grade) of the various vegetables:

CANNED VEGETABLES	PORTIONS PER A10 CAN
Beetroot	1,86kg = 28 x 65g
Mixed vegetables	1,86kg = 28 x 65g
Green beans	1,64kg = 25 x 65g
Green peas	1,96kg = 30 x 65g
Tomato and onion, braised	3,00kg = 46 x 65g
Tomatoes, whole and peeled	1,82kg = 28 x 65g
Carrots	1,82kg = 28 x 65g

4.3.1.4 Tea (preferably Rooibos tea): Ration per Child: 1,5 - 2,5g (*dry weight*)

- A portion is one cup and is equivalent to one of the following:

Tea	1,5g
Rooibos tea (<i>loose</i>)	1,5g

- One tea bag (2,5g) is sufficient for 2 cups of tea.
- It is more economical to use ground coffee and loose tea.

4.3.1.5 Jam: Ration per Child: 30 - 40g (25 - 30ml)

- This is for spreading on bread at breakfast and supper. Patients usually eat one slice of bread with their main dish or soup and the second slice with jam or syrup.

4.3.1.6 Margarine/Cooking Oil: Ration per Child: 20 - 25 g/ml

- Margarine is used for spreading bread. One teaspoon is 5 g and is enough to spread one slice of bread thinly.
- The oil is used for food preparation, e.g. fried dishes.
- If 15g margarine is used for spreading bread, then only 10ml oil and/or salad dressing or margarine can be used with salads or for cooking purposes. Fried foods on the menu should, however, be restricted.

4.3.1.7 Milk**(i) Fresh: Ration per child: 500ml**

- Milk is used for *(example of milk distribution)*:

Breakfast porridge	75ml
Breakfast drink	175ml
Mid-morning tea	50ml
Afternoon tea	50ml
Supper drink	150ml
TOTAL	500ml

(ii) Full cream-milk powder: Ration per child: 5g (50ml reconstituted)

- The full cream milk powder can be used for custard, white sauces, puddings and dishes, e.g. macaroni-and-cheese. Full cream-milk powder to make one litre follow directions on the package

4.3.1.8 Sugar: Ration per Child: 30 - 40g

- Example of sugar distribution:

Sugar is used for	
Breakfast porridge	2 teaspoons 10g
Mid-morning tea	2 teaspoons 10g
Afternoon tea	2 teaspoons 10g
TOTAL	30g

The rest of the sugar may be used for cooking purposes.

4.3.1.9 Meat/Poultry/Fish**(i) Raw, without bone: Ration per person: 100 - 120g**

OR

(ii) Raw, with bone: Ration per person: 125 - 150g

- Portion sizes for meat, fish and poultry:

TYPE OF MEAT	SIZE OF SERVED PORTIONS	PURCHASE WEIGHT	NUMBER OF PORTION PER KG
MEAT WITHOUT BONE			
Mince meat, lean	35g	50g	20
Pot or oven Roast	35g	75g	13
Beef, mutton or pork	35g	50 - 60g	18 - 20
<i>Stewing meat</i>			
Beef, mutton or pork	35g	60g	16 - 17
Steak	35g	50g	20
Sausage	35g	60g	16 - 17
Liver or other organ	35g	60g	16 - 17

MEAT WITH BONE			
Leg, mutton or pork	35g	90g	11
Chops, mutton or pork	50g (<i>1 chop</i>)	75g	13
Chuck	50g	75g	13
Forequarter	50g	75g	13
PROCESSED MEAT			
Polony, Vienna	40g	40g	25
FISH (Frozen, without batter)			
Haddock fillets, with skin	40 - 50g	60g	17
Hake fillets, without skin	50 - 55g	60g	17
Hake portions, without skin	40g	70g	14
POULTRY			
Chicken breast	50g	75g	13
Chicken thigh	50g	75g	13
Turkey	50g	60 - 70g	15

(iii) Guidelines for uniform menus

- In order to ensure uniformity in respect of menus, the following guide show how many times per week certain items may be repeated. The guidelines fit in with the ration scales and include breakfasts, lunches and suppers:

TYPE OF FOOD	NUMBER OF SERVINGS PER WEEK
Eggs (<i>boiled, fried, scrambled, or poached</i>)	2 - 3
Sausage	2
Fish	3
Poultry	3
Minced meat	3
Roast (<i>e.g. roast chicken or fore-quarter cut</i>)	1
Meatless dish (<i>e.g. cheese dish</i>)	2 - 3
Stew	3
TOTAL	21 Meals

- Meat, especially minced meat, can be extended with TVP (*textured vegetable protein*) or dried legumes in the amounts as shown on the ratio scale.
- Roasts can be alternated or replaced with stews.
- Polony or processed cold meats can be served in summer in place of stews.

4.3.1.10 Fruit: Ration per Child: 100 - 200g/day

- The ration scale allows one portion of fruit per child per day.
- Portion sizes for fruit

FRUIT	SIZE OF SERVED PORTION	PURCHASE WEIGHT	NUMBER OF PORTIONS PER kg
APPLES			
Fresh, medium	1	140 - 150g	6 - 8
APRICOTS			
Fresh, medium	2 x 35g	70g	14
BANANAS			
Fresh, medium	1	150 - 180g	5 - 6
GRAPEFRUIT	1 half	150g	7
GRAPES	1 bunch = 100g	120g	8
GUAVAS			
Fresh, small	2 x 50g	100g	10
Medium	1 x 85g	85 - 100g	10 - 12
ORANGES			
Fresh, medium	1	140 - 150g	6 - 7
PEACHES			
Fresh, medium	1	115g	8 - 9

PEARS Fresh, medium	1	140 - 150g	6 - 8
PINEAPPLES Fresh, peeled	100 - 110g	200g	5
PLUMS Fresh, medium	2 x 50 - 60g	100 - 120g	8 - 10
SPANSPEK Fresh, peeled	100g	200g	5
WATERMELON Fresh, peeled	90 - 100g	200g	5
PURE FRUIT JUICE OR FRUIT NECTAR	150ml ready to drink Refer to the instructions on the label for the correct dilution		

- Fresh fruit may be substituted with canned fruit occasionally, but not more than once per week. The following weights can be used for calculating the purchase weight of canned fruit in A10 packs. These weights represent the net weight (*drained weight, choice grade*) of the various types of fruit:

CANNED FRUIT	PORTIONS PER A10 TIN	SIZE OF SERVED PORTION
Apricot, halves	1,82kg = 115 - 130 halves	2 x 35g = 70g
Apple, pie	2,84kg = 28 x 100g portions	100g
Guavas, halves	1,65kg = 27 - 40 halves	2 x 50g = 100g
Pears, halves	1,75kg = 30 - 38 halves	2 x 50g = 100g
Peaches, halves	1,82kg = 34 - 36 halves	2 x 50g = 100g
slices	1,82kg = 120 - 135 slices	6 - 7 slices
Pineapple, diced	1,82kg = 115 - 130 halves	125ml = 90 - 100g
rings	1,87kg = 29 x 65g rings	1 - 2 rings

4.3.2 WEEKLY ALLOWANCES

(i) **Dried Legumes/Tvp (Dry): Ration per Child: 60 - 100g**

- The quantities per portion for various uses are as follows:
 - Dried legumes in soup/dishes 25-30g
 - Combined with meat 10-15g
- TVP (*texture vegetable protein*) is used with minced meat dishes as a meat extender (*see ration scales*).

(ii) **Eggs: Ration per Child: 3-4**

- Eggs are to be served 2-3 times per week at breakfast. One egg is a portion and is equal to one of the following:
 - Frozen scrambled egg mixture 50g
 - Egg powder 13g

(iii) **Cheese: Ration per Child: 60 - 80g**

- The quantities for different uses are as follows:
 - Cheese on its own (*for breakfast*) 15g
 - Meatless dish (*main course for light meal*) 15g

(iv) **Sandwich Spreads**

- The quantities allowed are as follows:
 - Peanut butter 15g
 - Meat/vegetable spread 5g

4.3.3 KITCHEN COMMODITIES FOR CHILDREN 6 - 12 YEARS

The quantities of food used to make dishes, sauces, etc. are indicated under item 4.2

4.4 EXAMPLE OF THE NUTRIENT ANALYSIS OF PRUDENT DIET FOR CHILDREN 6-12 YEARS (MALE)

SUBJECT INFORMATION	STATISTICS
Date	31/08/2000
Type	Daily
Reference	Feeding
Sex	Male
Age	7
Weight	28kg
Height	1.32m
BM Index	16.07

MEAL CONSTITUENTS	
Bread/rolls, brown	175g
Rice, white cooked	70g
Oats, rolled or oat-meal, cooked	50g
Potato, cooked with butter	100g
Carrot, cooked	280g
Tea, brewed	400g
Marmalade	40g
Margarine, hard/brick	20g
Milk, whole fresh, also UHT/longlife	500g
Suger, white granulated	40g
Beef, bolo/topside, braised (lean)	120g
Banana, raw	200g
Egg, boiled	60g

MACRO NUTRIENTS	AMOUNT	RDA	%
Moisture (%)	77.40%		
Energy (kJ)	8 405kJ	8 368	100.44%
Total Protein (g)	86.90g	28.00	310.36%
Plant Protein (g)	24.80g		
Animal Protein (g)	62.10g		
Total Fat (g)	60.30g		
Saturated Fat (g)	23.64g		
Mono-unsaturated Fat (g)	22.36g		
Poly-unsaturated Fat (g)	7.63g		
Total trans Fatty Acids (g)	4.77g		
Fat Ratio (poly/sat)	0.32		
Cholesterol (mg)	446.00mg		
Total Carbohydrates (g)	276.00g		
Fibre (g)	26.60g		
Added Sugar (g)	65.40g		
Total CHO-Sugar (g)	210.60g		
Alcohol (g)	00.00g		
Energy – Protein (%)			17.266%
Energy – Fat (%)			27.047%
Energy – Carbohydrates (%)			60.124%
Energy – Alcohol (%)			00.000%

PRUDENT DIET RECOMMENDATIONS

Energy from Total Fat is BELOW the recommended 30% maximum
Energy from Saturated Fat is ABOVE the recommended 10% maximum
Energy from Poly-unsaturated Fat is BELOW the recommended 10% minimum
Energy from Carbohydrates is ABOVE the recommended 50% minimum
Cholesterol intake EXCEEDS the recommended 300mg maximum per day
Fibre intake is ABOVE the recommended 20g minimum per day

WHO RECOMMENDATIONS (% of Recommended Value)

Energy (kJ)	134.89%	of	6 231
Protein (g)	307.28%	of	28.28
Vitamin A (ug)	818.50%	of	400.00
Vitamin D (ug)	238.00%	of	2.50
Thiamin (mg)	112.22%	of	0.90
Riboflavin (mg)	146.92%	of	1.30
Niacin (mg)	97.24%	of	14.50
Folic Acid (ug)	251.00%	of	100.00
Vitamin B12 (ug)	406.67%	of	1.50
Vitamin C (mg)	190.00%	of	20.00
Calcium (mg)	212.50%	of	400.00
Iron (mg)	238.00%	of	5.00

MINERALS	AMOUNT	RDA	%
Calcium (mg)	850.00	800.00	106.25%
Iron (mg)	11.90	10.00	119.00%
Magnesium (mg)	378.00	170.00	222.35%
Phosphorus (mg)	1 456.00	800.00	182.00%
Potassium (mg)	3 559.00	* 1 600.00	222.44%
Sodium (mg)	1 770.00	** 2 000.00	88.50%
Zink (mg)	13.77	10.00	137.70%
Copper (mg)	1.51	*** 1.10	137.27%
Manganese (mg)	5.47	*** 2.50	218.80%

* Estimated minimum requirement

** This is not a RDA, but a dietary guideline

*** Estimated safe and adequate daily dietary intake (value is the mean of the range)

VITAMINS	AMOUNT	RDA	%
Vitamin A (RE) (ug)	7 274	700.00	1 039.14%
Thiamin (B1) (mg)	1.01	1.00	101.00%
Riboflavin (B2) (mg)	1.91	1.20	159.17%
Niacin (mg)	14.10	13.00	108.46%
Vitamin B6 (mg)	3.081	1.40	220.07%
Folic Acid (ug)	251.00	100.00	251.00%
Vitamin B12 (ug)	6.10	1.40	435.71%
Vitamin C (mg)	38.00	45.00	84.44%
Panto-acid (mg)	5.84	*** 4.50	129.78%
Biotin (ug)	31.90	*** 30.00	106.33%
Vitamin D (ug)	5.95	10.00	59.50%
Vitamin E (mg)	7.68	7.00	109.71%

* Estimated safe and adequate daily dietary intake (value is the mean of the range)

FATTY ACID COMPOSITION	AMOUNT
C4 : 0 (g)	0.550
C6 : 0 (g)	0.300
C8 : 0 (g)	0.200
C10 : 0 (g)	0.410
C12 : 0 (g)	0.630
C14 : 0 (g)	2.690
C16 : 0 (g)	12.650
C18 : 0 (g)	5.260
C20 : 0 (g)	0.060
C22 : 0 (g)	0.050
C24 : 0 (g)	0.030
C14 : 1 (g)	0.200
C16 : 1 (g)	1.150
C18 : 1 (g)	20.780
C20 : 1 (g)	0.040
C22 : 1 (g)	0.000
C18 : 2 (g)	6.960
C18 : 3 (g)	1.560
C18 : 4 (g)	0.000
C20 : 3 (g)	0.000
C20 : 4 (g)	0.110
C20 : 5 (g)	0.020
C22 : 5 (g)	0.000
C22 : 6 (g)	0.040

ESSENTIAL AMINO ACIDS	AMOUNT
Isoleucine (g)	3.932
Leucine (g)	6.807
Lysine (g)	5.762
Methionine (g)	2.041
Phenylalanine (g)	3.753
Threonine (g)	3.507
Tryptophan (g)	1.138
Valine (g)	4.508
Arginine (g)	4.686
Histidine (g)	2.576

5 FOOD RATION SCALE FOR CHILDREN 4 - 6 YEARS

5.1 DAILY AND WEEKLY ALLOWANCE PER PATIENT (*CHILDREN 4 - 6 YEARS*)

ITEM	DAILY ALLOWANCE PER PATIENT SERVING	PORTION SIZE
Brown/whole-wheat bread	120 - 140g	A portion of bread is equivalent to one slice (<i>35-40g</i>) and is equivalent to the following: Biscuits/Rusk's 30g Crackers 30g Bread roll/bun 50g
Dry cereals <i>Breakfast</i>	50 - 90g 20 - 40g	A portion of breakfast cereal is equivalent to the following: Brown/ Whole-wheat bread 30 - 40g Corn-flakes 30g Oats, dry 30g Grain sorghum, dry 30g Maize-meal, Dry Soft porridge 30g Thick porridge 50g
<i>Light or main meal</i>	30 - 50g	A portion of starch is equivalent to one of the following: Rice/maize-rice/pasta, dry 30g Samp/crushed wheat, dry 30g Maize-meal, dry: thick porridge 50g The starch may be replaced with a starchy vegetable, e.g. potatoes. (<i>Section 5.3</i>)
Vegetables - fresh as purchased Potatoes/sweet potatoes Other vegetables	100 - 120g 30g 180 - 240g	Potatoes to be used for cooking purposes (<i>Section 5.3* for portion sizes of potatoes and other vegetables as purchased</i>)
Tea (preferably Rooibos tea), cocoa	1,5 - 2,5g	A portion is one cup and is equivalent to one of the following: Rooibos tea 0,75g (<i>Maximum 2 cups per day</i>)
Jam	30 - 40 g (<i>2 5 - 30 ml</i>) 10g	A portion of jam is equivalent to one of the following: Jam, portioned 15g or 20g Un-portioned 15g (<i>12,5ml</i>) Honey/Syrup 15g Jam to be used for cooking purposes
Margarine Cooking oil	20g 5 ml	A portion of margarine is 5g (<i>5ml</i>) is equivalent to one of the following: Cooking oil 5ml Mayonnaise/salad cream/dressing 5ml Oil for cooking purposes
Milk full cream, fresh fresh, low fat	500ml	A portion of fresh, full cream milk is 200ml and is equivalent to one of the following: Evaporated milk 100ml Buttermilk 200ml Milk powder 20g Fresh full-cream milk may be replaced with milk with 2% fat (<i>low fat milk</i>) Full cream milk powder is used for cooking purposes
Full cream-milk powder	5g	
Sugar	30 - 40g 10g	A portion of sugar is equivalent to the following: Portioned 10g Un-portioned 5g Sugar for cooking purposes

Meat/poultry/fish Raw, without bone OR Raw with bone	80 - 100g 100 - 125g	A portion of meat/poultry/fish is equivalent to the purchase weight of the meat /poultry /fish as shown in <i>Section 5.3*</i> 60g meat without bone may be replaced with one of the following combinations of TVP (<i>texturised vegetable protein</i>), or dried legumes, and meat: 5g TVP (<i>dry</i>) + 45g meat-raw, with bone 5g TVP (<i>dry</i>) + 35g meat-raw, without bone 6,5g TVP (<i>dry</i>) + 25g meat-raw, without bone 15g TVP (<i>frozen</i>) + 45g meat-raw, with bone 25g TVP (<i>frozen</i>) + 25g meat-raw, without bone 7,5g legumes + 45g meat-raw, with bone 7,5g legumes + 35g meat-raw, without bone
Fruit Fresh, as purchased	1 portion (100 - 200g)	A portion of fresh fruit in season is equivalent to the purchase weight of one of type of fruit (<i>Section 5.3</i>)* 150ml fruit juice/ nectar may replace a portion of fresh fruit once a week or 30g fruit juice powder.
ITEM	WEEKLY ALLOWANCE PER PATIENT SERVING	PORTION SIZE
Dried legumes /TVP (dry /frozen)	45 - 60g	The quantities for various uses per portion are as follows: Dried legumes in soup/dishes 30 - 45g Dried legumes or TVP combined with meat 5 - 10g
Eggs	2 1	One egg is a portion and is equal to one of the following: Frozen scrambled-egg mixture 50g Egg powder 13g Egg for cooking purposes
Cheese	60 - 80g 5g	The quantities for different uses are as follows: Cheese on its own: <i>Cheese:</i> 15g Meatless dish (<i>main course for light meal</i>): <i>Cheese:</i> 15g Cheese to be used for cooking purposes
Ice cream/Sorbet	75g	A portion of ice-cream is: 125ml
Sandwich spreads Peanut butter Meat/vegetable spread	15g 5g	

* *Section 5.3: Interpretation of the ration scale, provides information about the use of the ration scale for children 4-6 years.*

5.2 KITCHEN COMMODITIES FOR CHILDREN 4 - 6 YEARS

ITEM	WEEKLY PER 100 CHILDREN	BASIS FOR SUBSTITUTIONS
Vinegar	500ml	
Baking powder	225g	20g baking powder = 5 g bicarbonate of soda + 10g cream of tartar
Chutney	500ml/g	100 ml chutney = 100 ml/g tomato sauce OR 100 ml/g Worcester sauce
Flavouring	50ml	
Jelly powder	1kg	100g jelly powder = 10g gelatine OR 100g dessert powder
Curry powder/Masala	125g	
Colouring and browning	15ml	
Cake flour	7,5kg	100g cake flour = 50g maize meal OR 70g Sago OR 50g custard powder

Fruit Juice/nectar concentrated	7,5 litre		
Mageu	25 litre	Once a week	
Mustard powder	20g	10 g mustard powder	= 30g pre-prepared mustard
cream	1,5 litre	100 ml cream	= 100 ml artificial cream
Pepper	100g		
Herbs and spices	175g	1g of any herb or spice	= 1g of a suitable flavouring powder
Salt	3kg		
Tomato puree	1kg/litre	100 g/ml tomato puree	= 50 g/ml tomato paste OR 500 g/ml canned tomatoes
Tomato sauce	1kg/litre	100 g/ml tomato sauce	= 100 g/ml Worcester sauce OR 100g/ml mayonnaise
Meat extract cubes powder	1,5kg	100g meat extract	= 100g sauce powder/soup powder OR 2,5 litre meat stock (<i>made up</i>)
Soup powder	24 x 5 litre packets	One 5 litre packet	= 25 to 30 portions of soup (170 to 200ml per portion)

5.3 INTERPRETATION OF THE RATION SCALE FOR CHILDREN 4 - 6 YEARS

5.3.1 DAILY ALLOWANCES: FULL NORMAL DIET

5.3.1.1 Brown/Whole-wheat Bread: Ration per Child: 120 - 140g

- This ration is based on 3-4 slices of bread per day. A standard loaf will provide 21-25 slices. Bread is served at breakfast and supper. Children seldom eat more than 2 slices with a meal and for smaller children one slice will be sufficient.

5.3.1.2 Dry Cereals: Ration per Child: 50 - 90g

- These include porridge meal, dry cereals, pastas, rice, maize rice and samp.

(i) **Breakfast: Ration per child: 20 - 40g**

- A portion of breakfast cereal, dry weight, is equivalent to the following:

Brown/whole-wheat bread	30-40g
Corn-flakes	30g
Oats	30g
Grain sorghum	30g
Maize-meal	
<i>Soft porridge</i>	30g
<i>Thick porridge</i>	50g

- Dry breakfast cereals are more expensive than soft porridges. To cut costs corn flakes are restricted to once per week, but may also be replaced entirely with soft porridge.

(The cultural eating habits of the people in the area must be taken into account)

(ii) **Light or main meal: Ration per child 30 - 50g**

- A portion of starch, dry weight, is equivalent to one of the following:

Rice/maize rice/pasta	30g
Samp/crushed wheat	40g
Maize-meal: thick porridge	50g

- A portion of starch is also equivalent to a portion of the following starchy vegetables:

Potato/sweet potato	120 - 140g (<i>purchase weight</i>)
"Sousboontjies"/baked beans	100g
Sweet-corn, canned or frozen	100g

Usually when potatoes or other starchy vegetables are used as the starch at one meal, rice or another grain will be the starch at the second meal.

5.3.1.3 Vegetables - Fresh as Purchased

(i) Potatoes/sweet potatoes: Ration per person 100 - 120g

- There are 6-8 potatoes per kilogram, depending on their size. When menus are drawn up, baked beans, "sousboontjies" and sweet-corn should not be regarded as vegetables, but can be used as substitutes for potatoes or cereals such as rice, samp, maize rice and pastas. Baked beans can be used as a protein-rich dish for breakfast or a light meal. A portion of potato/sweet potato, or other starchy vegetable as purchased, is equivalent to the following:

STARCHY VEGETABLE	SIZE OF SERVED PORTION	PURCHASE WEIGHT	NUMBER OF PORTIONS PER kg
POTATOES			
Fresh, Whole	100g	120 - 140g	7 - 8
Fresh, diced	100g	120 - 140g	7 - 8
Fresh, mashed	110	125g	8
Dehydrated	100g	23g	43
SWEET POTATOES			
Fresh	100 - 120g	150 - 170g	6
Dehydrated	100g	28g	36
SOUSBOONTJIES/ BAKED BEANS			
Canned	100g	100g	
SWEET - CORN			
Canned, creamed	100g	100g	
Frozen, cut corn	100g	100g	10
DRIED BEANS, PEAS, LENTILS	100g cooked	40g raw	25

- Potatoes may be used in a stew as an extender. The purchase weight of potatoes as an extender in stew is: 40-50g (*210 g per week*).
- The following weights can be used for calculating the purchase weights of canned vegetables in A10 cans. These weights represent the net weight (*drained weight, choice grade*) of the various vegetables:

STARCHY VEGETABLE	PORTIONS PER CAN
Baked beans in tomato sauce	3,06kg = 30 x 100 g portions per A10 can
Sweet-corn, creamed	3,09kg = 31 x 100 g portions per A10 can
	420g = 4 x 100 g portions per 420g can

(ii) Other vegetables: Ration per child: 180 - 240g

- This allows for two cooked vegetables and one salad to be served daily.
- A portion of vegetables is equivalent to the purchase weight of one of the following vegetables:

VEGETABLES	SIZE OF SERVED PORTION	PURCHASE WEIGHT	NUMBER OF PORTIONS AS PURCHASED PER KG
BABY MARROW Fresh Frozen Pre-prepared	45 – 60g 45 – 60g 45g	50 – 65g 55 – 60g 50g	14 – 15 12 – 14 14
BEETROOT Fresh Canned Pre-prepared	45 – 60g 45 – 60g 45g	90 – 140g 55 – 70g 60g	7 – 10 13 – 14 7
BROCCOLI Fresh Canned Pre-prepared	45 – 60g 45 – 60g 45g	100 – 130g 45 – 60g 70g	8 - 9 13 - 16 6
BUTTERNUT Fresh Pre-prepared	(without skin) 70 - 80g 70g	90 - 110g 90g	9 - 10 9
CABBAGE Fresh, cooked Fresh, salad Dehydrated Pre-prepared	45 - 60g 45 - 65g 45 - 60g 45g	80 - 100g 50 - 80g 10 - 12g 80g	10 - 12 12 - 15 80 - 100 10
CARROTS Fresh, with tops Fresh, without tops Salad Frozen Dehydrated Pre-prepared	45 - 60g 45 - 60g 45g 45 - 60g 45 - 60g 45g	100 - 130g 65 - 85g 65g 45 - 60g 10 - 12g 75g	8 - 10 12 - 14 14 13 - 16 86 - 90 10
CAULIFLOWER Fresh Frozen Dehydrated Pre-prepared	45 - 60g 45 - 60g 45 - 65g 45g	100 - 130g 45 - 60g 10 - 12g 80g	8 - 9 14 - 16 80 - 100 9
CUCUMBER Fresh English	30 - 45g 30g	30 - 45g 30g	13 - 16 13
GEM SQUASH Fresh cooked Pre-prepared	(with skin) 70 - 80g 70g	160g 100g	7 7
GREEN BEANS Fresh Frozen Canned Dehydrated Pre-prepared	45 - 60g 45 - 60g 45 - 60g 45 - 60g 45g	55 - 70g 45 - 60g 100 - 130g 10 - 12g 55g	12 - 14 13 - 16 80 - 100 12
GREEN PEAS Frozen Canned Dehydrated	45 - 65g 45 - 65g 45 - 65g	45 - 65g 50 - 80g 12 - 18g	15 - 22 50 - 70
GREEN PEPPER Fresh, medium, rings Fresh, medium, whole	6g According to dish	8g 120g	125 8
HUBBARD SQUASH Fresh Pre-prepared	70 - 80g 70g	120 - 130g 90g	9 10
LETTUCE	According to dish	8 - 10g (1 leaf)	100

MIXED VEGETABLES			
Frozen	45 - 60g	45 - 60g	12 - 15
Canned	45 - 60g	100 - 130g	
MOROGO			
Dehydrate	45 - 60g	10 - 13g	60 - 75
ONIONS			
Fresh, medium	According to dish	100g purchased = 85g peeled	10
Dehydrated	According to dish	13g dehydrated = 56g dehydrated	
Pre-prepared	According to dish	85g	10
PUMPKIN			
Fresh, cooked	70 - 80g	140 - 160g	8
Pre-prepared	70g	90g	9
SPINACH			
Fresh, cooked	45 - 60g (without stalks)	120 - 150g	7 - 9
Fresh, cooked	45 - 60g (end of stalks cut off)	75 - 95g	10 - 12
Dehydrated	45 - 60g	10 - 14g	60 - 75
Pre-prepared	45g	75g	10
TOMATOES			
Salad	30 - 60g	55 - 85g	13 - 18
Canned	According to dish	According to dish	

- The following weights can be used for calculating the purchase weights of canned vegetables in A10 cans. These weights represent the net weight (*drained weight, choice grade*) of the various vegetables.

CANNED VEGETABLES	PORTIONS PER A10 CAN
Beetroot	1,86kg = 28 x 65g
Mixed vegetables	1,86kg = 28 x 65g
Green beans	1,64kg = 25 x 65g
Green peas	1,96kg = 30 x 65g
Tomato and onion, braised	3,00kg = 46 x 65g
Tomatoes, whole and peeled	1,82kg = 28 x 65g
Carrots	1,82kg = 28 x 65g

5.3.1.4 Tea (preferably Rooibos tea): Ration per Child: 1,5 - 2,5g (*dry weight*)

- A portion is one cup and is equivalent to one of the following:

Tea	1,5g
Rooibos tea (<i>loose</i>)	1,5g

*One tea bag (2,5g) is sufficient for 2 cups of tea
It is more economical to use loose tea.*

5.3.1.5 Jam: Ration per Child: 30 - 40g (*25 - 30ml*)

- This is for spreading on bread at breakfast and supper. Patients usually eat one slice of bread with their main dish or soup and the second slice with jam or syrup.

5.3.1.6 Margarine/Cooking Oil: Ration per Child: 20 - 25 g/ml

- Margarine is used for spreading bread. One teaspoon is 5g and is enough to spread one slice of bread thinly.
- The oil is used for food preparation, e.g. fried dishes.

- If 15g margarine is used for spreading bread, then only 10ml oil and/or salad dressing or margarine can be used with salads or for cooking purposes. Fried foods on the menu should, however, be restricted.

5.3.1.7 Milk

(i) Fresh: Ration per child: 500ml

- Milk is used/distributed as follows:

Breakfast porridge	75ml
Breakfast drink	175ml
Mid-morning tea	50ml
Afternoon tea	50ml
Supper drink	150ml
TOTAL	500ml

(ii) Full cream-milk powder: Ration per child: 5g (50ml reconstituted)

- The full cream-milk powder can be used for custard, white sauces, puddings and dishes, e.g. macaroni-and-cheese. Full cream milk powder, follow directions on package for making one litre.

5.3.1.8 Sugar: Ration per Child: 30 - 40g

- Example of sugar distribution:

SUGAR IS USED FOR:	
Breakfast porridge	2 teaspoons (10g)
Mid-morning tea	2 teaspoons (10g)
Afternoon tea	2 teaspoons (10g)
TOTAL	30g

The rest of the sugar may be used for cooking purposes.

5.3.1.9 Meat/Poultry/Fish

(i) Raw, without bone: Ration per child: 100 - 120g

OR

(ii) Raw, with bone: Ration per child: 125 - 150g

- Portion sizes for meat, fish and poultry

TYPE OF MEAT	SIZE OF SERVED PORTIONS	PURCHASE WEIGHT	NUMBER OF PORTION PER kg
MEAT WITHOUT BONE			
Mince meat, lean	35g	50g	20
Pot or oven Roast	35g	75g	13
Beef, mutton or pork	35g	50 - 60g	18 - 20
<i>Stewing meat</i>			
Beef, mutton or pork	35g	60g	16 - 17
Steak	35g	50g	20
Sausage	35g	60g	16 - 17
Liver or other organ meat	35g	60g	16 - 17
MEAT WITH BONE			
Leg, mutton or pork	35g	90g	11
Chops, mutton or pork	50g (1 chop)	75g	13
Chuck	50g	75g	13
Forequarter	50g	75g	13
PROCESSED MEAT			
Polony, Vienna	40g	40g	25

FISH (frozen, without batter)			
Haddock fillets, with skin			
Hake fillets, without skin	40 - 50g	60g	17
Hake portions, without skin	50 - 55g	60g	17
	40g	70g	14
POULTRY			
Chicken breast	50g	75g	13
Chicken thigh	50g	75g	13
Turkey	50g	60 - 70g	15

(iii) Guidelines for uniform menus

- In order to ensure uniformity in respect of menus, the following guide show how many times per week certain items may be repeated. The guidelines fit in with the ration scales and include breakfasts, lunches and suppers:

TYPE OF FOOD	NUMBER OF SERVINGS PER WEEK
Eggs (<i>boiled, fried, scrambled, or poached</i>)	2 - 3
Sausage	2
Fish	3
Poultry	3
Minced meat	3
Roast (<i>e.g. roast chicken or fore-quarter cut</i>)	1
Meatless dish (<i>e.g. cheese dish</i>)	2 - 3
Stew	3
TOTAL	21 Meals

- Meat, especially minced meat, can be extended with TVP (*textured vegetable protein*) or dried legumes in the amounts as shown on the ratio scale.
- Roasts can be alternated or replaced with stews.
- Polony or processed cold meats can be served in summer in place of stews.

5.3.1.10 Fruit: Ration Per Child: 100 - 200g/day

- The ration scale allows one portion of fruit per child per day.
- Portion sizes for fruit:

FRUIT	SIZE OF SERVED PORTION	PURCHASE WEIGHT	NUMBER OF PORTIONS PER kg
APPLES			
Fresh, small	1	115 - 120g	8 - 9
APRICOTS			
Fresh, medium	2 x 35g	70g	14
BANANAS			
Fresh, medium	1	150 - 180g	5 - 6
GRAPEFRUIT	1 half	150g	7
GRAPES	1 bunch=100g	120g	8
GUAVAS			
Fresh, small	2 x 50g	100g	10
Medium	1 x 85g	85 - 100g	10 - 12
ORANGES			
Fresh, medium	1	140 - 150g	6 - 7
PEACHES			
Fresh, medium	1	115g	8 - 9
PEARS			
fresh, medium	1	140 - 150g	8 - 9
PINEAPPLES			
Fresh, peeled	100 - 110g	200g	5
PLUMS			
Fresh, medium	2 x 50 - 60g	100 - 120g	8 - 10

SPANSPEK Fresh, peeled	100g	200g	5
WATERMELON Fresh, peeled	90 - 100g	200g	5
PURE FRUIT JUICE OR FRUIT NECTAR	150ml ready to drink Refer to the instructions on the label for the correct dilution		

- Fresh fruit may be substituted with canned fruit occasionally, but not more than once per week. The following weights can be used for calculating the purchase weight of canned fruit in A10 packs. These weights represent the net weight (*drained weight, choice grade*) of the various types of fruit:

CANNED FRUIT		PORTIONS PER A10 TIN	SIZE OF SERVED PORTION
Apricot,	halves	1,82kg = 115 - 130 halves	2 x 35g = 70g
Apple,	pie	2,84kg = 28 x 100g portions	100g
Guavas,	halves	1,65kg = 27 - 40 halves	2 x 50g = 100g
Pears,	halves	1,75kg = 30 - 38 halves	2 x 50g = 100g
Peaches,	halves	1,82kg = 34 - 36 halves	2 x 50g = 100g
	slices	1,82kg = 120 - 135 slices	6 - 7 slices
Pineapple,	diced	1,82kg = 115 - 130 halves	125ml = 90 - 100g
	Rings	1,87kg = 29 x 65g rings	1 - 2 rings

5.3.2 WEEKLY ALLOWANCES

(i) **Dried Legumes/TVP (Dry) : Ration per Child : 60 - 100g**

- The quantities per portion for various uses are as follows:
 - Dried legumes in soup/dishes 25 - 30g
 - Combined with meat 10 - 15g
- TVP (*texture vegetable protein*) is used with minced meat dishes as a meat extender (*see ration scale item 9*).

(ii) **Eggs: Ration per Child: 3 - 4**

- Eggs are to be served 2-3 times per week at breakfast. One egg is a portion and is equal to one of the following:
 - Frozen scrambled egg mixture 50g
 - Egg powder 13g
- 1 egg for cooking purposes

(iii) **Cheese: Ration per Child: 60 - 80g**

- The quantities for different uses are as follows:
 - Cheese on its own (*for breakfast*) 15g
 - Meatless dish (*main course for light meal*) 15g

(iv) **Sandwich Spreads**

- The quantities allowed are as follows:
 - Peanut butter 15g
 - Meat/vegetable spread 5g

5.3.3 KITCHEN COMMODITIES FOR CHILDREN 4 - 6 YEARS

The quantities of food used to make dishes, sauces, etc. are indicated under item 5.2

5.4 EXAMPLE OF THE NUTRIENT ANALYSIS OF PRUDENT DIET FOR CHILDREN 4-6 YEARS (FEMALE)

SUBJECT INFORMATION	STATISTICS
Date	31/08/2000
Type	Daily
Reference	Feeding
Sex	Female
Age	4
Weight	20kg
Height	1.12m
BM Index	15.94

MEAL CONSTITUENTS	
Bread/rolls, brown	140g
Rice, white cooked	60g
Oats, rolled or oat-meal, cooked	30g
Potato, boiled without skin	120g
Pumpkin/squash, summer CKD + HM	240g
Tea, brewed	400g
Marmalade	40g
Margarine, hard/brick	25g
Milk, whole fresh, also UHT/longlife	500g
Suger, white granulated	40g
Beef, bolo/topside, braised (lean)	100g
Banana, raw	200g
Egg, boiled	60g

MACRO NUTRIENTS	AMOUNT	RDA	%
Moisture (%)	78.30%		
Energy (kJ)	7 913kJ	7 531	105.07%
Total Protein (g)	76.30g	24.00	317.92%
Plant Protein (g)	20.50g		
Animal Protein (g)	55.80g		
Total Fat (g)	67.60g		
Saturated Fat (g)	23.67g		
Mono-unsaturated Fat (g)	27.47g		
Poly-unsaturated Fat (g)	10.06g		
Total trans Fatty Acids (g)	5.70g		
Fat Ratio (poly/sat)	0.43		
Cholesterol (mg)	417.00mg		
Total Carbohydrates (g)	246.70g		
Fibre (g)	18.30g		
Added Sugar (g)	65.40g		
Total CHO-Sugar (g)	181.30g		
Alcohol (g)	00.00g		
Energy – Protein (%)			16.103%
Energy – Fat (%)			32.207%
Energy – Carbohydrates (%)			55.927%
Energy – Alcohol (%)			00.000%

PRUDENT DIET RECOMMENDATIONS

Energy from Total Fat is ABOVE the recommended 30% maximum
Energy from Saturated Fat is ABOVE the recommended 10% maximum
Energy from Poly-unsaturated Fat is BELOW the recommended 10% minimum
Energy from Carbohydrates is BELOW the recommended 50% minimum
Cholesterol intake EXCEEDS the recommended 300mg maximum per day
Fibre intake is BELOW the recommended 20g minimum per day

WHO RECOMMENDATIONS (% of Recommended Value)

Energy (kJ)	136.51%	of	4 066
Protein (g)	338.22%	of	16.38
Vitamin A (ug)	154.40%	of	250.00
Vitamin D (ug)	56.00%	of	10.00
Thiamin (mg)	136.00%	of	0.50
Riboflavin (mg)	195.00%	of	0.80
Niacin (mg)	105.56%	of	9.00
Folic Acid (ug)	166.00%	of	100.00
Vitamin B12 (ug)	622.22%	of	0.90
Vitamin C (mg)	170.00%	of	20.00
Calcium (mg)	186.00%	of	400.00
Iron (mg)	120.00%	of	5.00

MINERALS	AMOUNT	RDA	%
Calcium (mg)	744.00	600.00	124.00%
Iron (mg)	6.00	10.00	60.00%
Magnesium (mg)	240.00	60.00	400.00%
Phosphorus (mg)	990.00	500.00	198.00%
Potassium (mg)	2 576.00	* 700.00	368.00%
Sodium (mg)	844.00	** 2 000.00	42.20%
Zink (mg)	9.12	5.00	182.40%
Copper (mg)	0.81	*** 0.60	135.00%
Manganese (mg)	1.41	*** 0.80	176.25%

* Estimated minimum requirement

** This is not a RDA, but a dietary guideline

*** Estimated safe and adequate daily dietary intake (value is the mean of the range)

VITAMINS	AMOUNT	RDA	%
Vitamin A (RE) (ug)	386	375.00	102.93%
Thiamin (B1) (mg)	0.68	0.40	170.00%
Riboflavin (B2) (mg)	1.56	0.50	312.00%
Niacin (mg)	9.50	6.00	158.33%
Vitamin B6 (mg)	1.722	0.60	287.00%
Folic Acid (ug)	166.00	35.00	474.29%
Vitamin B12 (ug)	5.60	0.50	1 120.00%
Vitamin C (mg)	34.00	35.00	97.14%
Panto-acid (mg)	4.24	*** 3.00	141.33%
Biotin (ug)	25.60	*** 15.00	170.67%
Vitamin D (ug)	5.60	10.00	56.00%
Vitamin E (mg)	5.25	4.00	131.25%

* Estimated safe and adequate daily dietary intake (value is the mean of the range)

FATTY ACID COMPOSITION	AMOUNT
C4 : 0 (g)	0.590
C6 : 0 (g)	0.310
C8 : 0 (g)	0.210
C10 : 0 (g)	0.440
C12 : 0 (g)	0.620
C14 : 0 (g)	2.650
C16 : 0 (g)	12.340
C18 : 0 (g)	5.510
C20 : 0 (g)	0.050
C22 : 0 (g)	0.030
C24 : 0 (g)	0.020
C14 : 1 (g)	0.210
C16 : 1 (g)	1.200
C18 : 1 (g)	19.040
C20 : 1 (g)	0.050
C22 : 1 (g)	0.000
C18 : 2 (g)	4.560
C18 : 3 (g)	0.580
C18 : 4 (g)	0.000
C20 : 3 (g)	0.000
C20 : 4 (g)	0.100
C20 : 5 (g)	0.020
C22 : 5 (g)	0.000
C22 : 6 (g)	0.040

ESSENTIAL AMINO ACIDS	AMOUNT
Isoleucine (g)	2.609
Leucine (g)	4.649
Lysine (g)	4.015
Methionine (g)	1.372
Phenylalanine (g)	2.419
Threonine (g)	2.302
Tryptophan (g)	0.751
Valine (g)	3.043
Arginine (g)	2.973
Histidine (g)	1.622

6 RATION SCALE FOR TODDLERS 1 - 3 YEARS

6.1 DAILY AND WEEKLY ALLOWANCE PER PATIENT (TODDLERS 1 - 3 YEARS)

ITEM	DAILY ALLOWANCE PER PATIENT SERVING	PORTION SIZE
Brown/whole-wheat bread	30 - 35g	A portion of bread is half a slice (17 - 20g) and is equivalent to the following: Biscuits/ Rusk's 15g Bread roll/ bun 25g Crackers 15g Maize meal, dry (soft or thick) 15 - 25g
Dry cereals Breakfast	50 - 70g 25 - 35g	A portion of breakfast cereal is equivalent to the following: Brown/whole-wheat bread 35 - 17g Corn-flakes 25g Oats, dry 25g Grain sorghum, dry 25g Maize-meal. Dry Soft porridge 25g Thick porridge 35g
Light or main meal	25 - 35g	A portion of starch is equivalent to one of the following: Rice/maize/rice/pasta, dry 25g Samp/crushed wheat, dry 25g Maize-meal, dry: thick porridge 35g The starch may be replaced with a starchy vegetable, e.g. potatoes. (Section 6.3)*
Vegetables - fresh as purchased Potatoes/sweet potatoes	80 - 100g	See Section 6.3* for portion sizes of potatoes and other vegetables as purchased
Other vegetables	20g 120 - 160g	For cooking purposes
Tea (preferably Rooibos tea), cocoa	1,5 - 2,5g	A portion is one cup and is equivalent to one of the following: Rooibos tea 0,75g (Maximum 2 cups per day)
Jam	10g (12,5ml) 5g	A portion of jam is equivalent to one of the following: Jam, portioned 10g (7,5ml) Syrup 10g (7,5ml) For cooking purposes
Margarine /cooking oil	5 - 10g/ml 5g	A portion of margarine is 2,5g (2,5ml) is equivalent to one of the following: Cooking oil 2,5ml Mayonnaise/salad cream/dressing 2,5ml For cooking purposes
Milk full cream fresh	500ml 5g	A portion of fresh, full cream milk is 200ml and is equivalent to one of the following: Evaporated milk 100ml Buttermilk 200ml Milk powder 20g Skim milk is used for cooking purposes
Skim-milk powder		
Sugar	25 - 40g 10g	A portion of sugar is equivalent to the following: Portioned 10g Un-portioned 5g For cooking purposes

Meat/poultry/fish Raw, without bone OR Raw with bone	70 - 80g	A portion of meat/poultry/fish is equivalent to the purchase weight of the meat/poultry/fish as shown in (Section 6.3)* 35g meat without bone may be replaced with one of the following combinations of TVP (texturised vegetable protein), or dried legumes, and meat: 3g TVP (dry) + 30g meat-raw, with bone 3g TVP (dry) + 25g meat-raw, without bone 10g TVP (frozen) + 30g meat-raw, with bone 50g TVP (frozen) + 25g meat-raw, without bone 7,5g legumes + 30g meat-raw, with bone 7,5g legumes + 25g meat-raw, without bone
	90 - 100g	
Fruit Fresh, as purchased OR Juice or nectar diluted	1 portion (100 - 200g) OR 75ml	A portion of fresh fruit in season is equivalent to the purchase weight of one of type of fruit as shown in (Section 6.3)* 75ml fruit juice/nectar may replace a portion of fresh fruit once a week, and is equivalent to 15g fruit juice powder
ITEM	WEEKLY ALLOWANCE PER PATIENT SERVING	PORTION SIZE
Cheese	50g	The quantities for different uses are as follows: Cheese on its own: Cheese: 10g Meatless dish (main course for light meal): Cheese: 10g
Sandwich spreads Peanut butter Meat / vegetable spread	5g 2,5g	
Dried legumes/TVP (dry/frozen)	10 - 20g	The quantities for various uses per portion are as follows: Dried legumes in soup/dishes 10 - 15g Dried legumes or TVP combined with meat 5g
Ice- cream/ Sorbet	75g	A portion of ice cream is 125ml
Eggs	2 - 3	One egg is a portion and is equal to one of the following: Frozen scrambled-egg mixture 50g Egg powder 13g

* (Section 6.3): Interpretation of the ration scale, provides information about the use of the ration scale for toddlers 1-3 years

6.2 KITCHEN COMMODITIES FOR TODDLERS 1 - 3 YEARS

ITEM	WEEKLY PER 100 TODDLERS	BASIS FOR SUBSTITUTIONS
Vinegar	350ml	
Baking powder	150g	20g baking powder = 5g bicarbonate of soda + 10g cream of tartar
Chutney	350ml/g	100ml chutney = 100ml/g tomato sauce OR 100ml/g Worcester sauce
Flavouring	35ml	
Jelly powder	700g	100g jelly powder = 10g gelatine OR 100g dessert powder
Curry powder/Masala	80g	
Colouring and browning	10ml	
Cake flour	5kg	100g cake flour = 50g maize meal OR 70g sago OR 50g custard powder
Fruit juice/nectar concentrated	5 litre	
Pepper	70g	
Herbs and spices	125g	1g of any herb or spice = 1g of a suitable flavouring powder

Salt	2kg	
Tomato puree	700g/ml	100g/ml tomato puree = 50g/ml tomato paste OR 500g/ml canned tomatoes
Tomato sauce	700g/ml	100g/ml tomato sauce = 100g/ml Worcester sauce OR 100g/ml mayonnaise
Meat extract cubes powder	1kg	100g meat extract = 100g sauce powder/soup powder OR 2,5 litre meat stock (<i>made up</i>)
Mageu	12,5 litres	125ml Mageu per toddler may be used once a week, instead of juice, or tea

6.3 INTERPRETATION OF THE RATION SCALE FOR TODDLERS 1 - 3 YEARS

6.3.1 DAILY ALLOWANCES: FULL NORMAL DIET

6.3.1.1 Brown/Whole-wheat Bread: Ration per Toddler: 30 - 35g

- This ration is based on one (1) and a half (1/2) slices of bread per day. A standard loaf will provide 21-25 slices. Bread is served at breakfast and supper. Toddlers seldom eat more than a half slice of bread at a meal. For older toddlers half a slice of bread may be increased to one slice at a time. The margarine allowance then increases to 5g with every slice of bread.

6.3.1.2 Dry Cereals: Ration per Toddler: 50 - 70g

- These include porridge meal, dry cereals, pastas, rice, maize rice and samp.

(i) **Breakfast: Ration per toddler: 25 - 35g**

- A portion of breakfast cereal, dry weight, is equivalent to the following:

Brown/whole-wheat bread	17 - 35g
Corn-flakes	25g
Oats	25g
Grain sorghum	25g
Maize-meal	
<i>Soft porridge</i>	25g
<i>Thick porridge</i>	35g

- Dry breakfast cereals are more expensive than soft porridges. To cut costs corn-flakes are restricted to once per week, but may also be replaced entirely with soft porridge.
(The cultural eating habits of the people in the area must be taken into account)

(ii) **Light or main meal: Ration per toddler: 25 - 50g**

- A portion of starch, dry weight, is equivalent to one of the following:

Rice/maize rice/pasta	25g
Samp/crushed wheat	30g
Maize-meal: thick porridge	35g

- A portion of starch is also equivalent to a portion of the following starchy vegetables:

Potato/sweet potato	90g (<i>purchase weight</i>)
"Sousboontjies"/baked beans	75g
Sweet-corn, canned or frozen	75g

- Usually when potatoes or other starchy vegetables are used as the starch at one meal, rice or another grain will be the starch at the second meal.

6.3.1.3 Vegetables - Fresh as Purchased

(i) Potatoes/sweet potatoes: Ration per toddler: 100 - 120g

- There are 6-8 potatoes per kilogram, depending on their size. When menus are drawn up, baked beans, "sousboontjies" and sweet-corn should not be regarded as vegetables, but can be used as substitutes for potatoes or cereals such as rice, samp, maize rice and pastas. Baked beans can be used as a protein-rich dish for breakfast or a light meal.
- A portion of potato/sweet potato, or other starchy vegetable as purchased, is equivalent to the following:

STARCHY VEGETABLE	SIZE OF SERVED PORTION	PURCHASE WEIGHT	NUMBER OF PORTIONS AS PURCHASED PER kg
POTATOES			
Fresh, Whole	70g	90g	11
Fresh, diced	60g	85g	12
Fresh, mashed	60g	85g	12
Dehydrated	75g	21g	48
SWEET POTATOES			
Fresh	70g	90g	11
Dehydrated	75g	21g	50
SOUSBOONTJIES/ BAKED BEANS			
Canned	75g	75g	
SWEET – CORN			
Canned, creamed	75g	75g	
Frozen, cut corn	75g	75g	13
DRIED BEANS, PEAS, LENTILS	75g cooked	30g raw	33

- Potatoes may be used in a stew as an extender. The purchase weight of potatoes as an extender in stew is: 30 (120 g per week)
- The following weights can be used for calculating the purchase weights of canned vegetables in A10 cans. These weights represent the net weight (*drained weight, choice grade*) of the various vegetables:

STARCHY VEGETABLE	PORTIONS PER CAN
Baked beans in tomato sauce	3,06kg = 30 x 100g portions per A10 can
Sweet-corn, creamed	3,09kg = 31 x 100g portions per A10 can 420g = 4 x 100g portions per 420g can

(ii) Other vegetables: Ration per toddler: 120 - 160g

- This allows for two cooked vegetables and one salad to be served daily.
- A portion of vegetables is equivalent to the purchase weight of one of the following vegetables:

VEGETABLES	SIZE OF SERVED PORTION	PURCHASE WEIGHT	NUMBER OF PORTIONS AS PURCHASED PER kg
BABY MARROW			
Fresh	40g	45g	16
Frozen	40g	40g	14
Pre-prepared	40g	45g	16

BEETROOT			
Fresh	40g	85g	11
Canned	40g	50g	17
Pre-prepared	40g	60g	12
BROCCOLI			
Fresh	40g	95g	10
Canned	40g	40g	15
Pre-prepared	40g	70g	12
BUTTERNUT	<i>(without skin)</i>		
Fresh	40g	85g	11
Pre-prepared	40g	65	13
CABBAGE			
Fresh, cooked	25g	75g	12
Fresh, salad	25g	45g	12
Dehydrated	20g	7g	120
Pre-prepared	25g	55g	16
CARROTS			
Fresh, with tops	40g	95g	10
Fresh, without tops	40g	60g	14
Salad	40g	60g	14
Frozen	40g	40g	17
Dehydrated	40g	8g	100
Pre-prepared	40g	55g	15
CAULIFLOWER			
Fresh	40g	95g	10
Frozen	40g	40g	17
Dehydrated	40g	8g	120
Pre-prepared	40g	55g	15
CUCUMBER			
Fresh	30g	30g	32
English	30g	30g	32
GEM SQUASH	<i>(with skin)</i>		
Fresh cooked	65g	165g	8
Pre-prepared	65g	100g	10
GREEN BEANS			
Fresh	40g	50g	15
Frozen	40g	40g	17
Canned	40g	95g	
Dehydrated	40g	8g	120
Pre-prepared	40g	45g	18
GREEN PEAS			
Frozen	40g	40g	22
Canned	40g	45g	
Dehydrated	40g	10g	100
GREEN PEPPER			
Fresh, medium, rings	6g	8g	125
Fresh, medium, whole	According to dish	120g	8
HUBBARD SQUASH			
Fresh	65g	125g	10
Pre-prepared	65g	100g	15
LETTUCE	According to dish	8 - 10g <i>(1 leaf)</i>	100
MIXED VEGETABLES			
Frozen	40g	40 g	30
Canned	40g	125g	
MOROGO			
Dehydrate	40g	10g	100
ONIONS			
Fresh, medium	According to dish	100g purchased = 85g peeled	10
Dehydrated	According to dish	13g dehydrated = 56g dehydrated	

PUMPKIN			
Fresh, cooked	65g	155g	8
Pre-prepared	65g	100g	10
SPINACH			
Fresh, cooked	40g (<i>without stalks</i>)	115g	10
Fresh, cooked	40g (<i>end of stalks cut off</i>)	70g	12
Dehydrated	40g	10g	100
Pre-prepared	40g	85g	14
TOMATOES			
Salad	30g	55g	18
Canned	According to dish	According to dish	

- The following weights can be used for calculating the purchase weights of canned vegetables in A10 cans. These weights represent the net weight (drained weight, choice grade) of the various vegetable.

CANNED VEGETABLES	PORTIONS PER A10 CAN
Beetroot	1,86kg = 28 x 65g
Mixed vegetables	1,86kg = 28 x 65g
Green beans	1,64kg = 25 x 65g
Green peas	1,96kg = 30 x 65g
Tomato and onion, braised	3,00kg = 46 x 65g
Tomatoes, whole and peeled	1,82kg = 28 x 65g
Carrots	1,82kg = 28 x 65g

6.3.1.4 Tea (Preferably Rooibos)/Cocoa: Ration per Toddler: 1,5 - 2,5g (*dry weight*)

- A portion is one cup and is equivalent to one of the following:

Cocoa	0,75 - 1,5g
Tea	0,75 - 1,5g
Rooibos tea (<i>loose</i>)	0,75 - 1,5g

One tea bag (2,5g) is sufficient for 2 cups of tea.

It is more economical to use loose tea.

6.3.1.5 Jam: Ration per Toddler: 15g (*12,5 ml*)

- This is for spreading on bread at supper. The extra 5g is for kitchen use.

6.3.1.6 Margarine/Cooking Oil: Ration per Toddler : 10 - 15g/ml

- Margarine is used for spreading bread. One teaspoon is 5 g and is enough to spread one slice of bread.

6.3.1.7 Milk

(i) **Fresh: Ration per Toddler: 500ml**

- Milk is used for as listed in table (Example of the milk distribution):

Breakfast porridge	75ml
Breakfast drink	175ml
Mid-morning tea	50ml
Afternoon tea	50ml
Supper drink	150ml
TOTAL	500ml

(ii) Full cream milk powder: Ration per toddler: 5g (50ml reconstituted)

- The full cream-milk powder can be used for custard, white sauces, puddings and dishes, e.g. macaroni-and-cheese. To make one litre full cream milk follow the directions on the package.

6.3.1.8 Sugar: Ration per Toddler: 25 - 40g

- Example of sugar distribution:

Sugar is used for:	
Breakfast porridge	2 teaspoons (10g)
Mid-morning tea	2 teaspoons (10g)
Afternoon tea	2 teaspoons (10g)
TOTAL	30g

The rest of the sugar may be used for cooking purposes.

6.3.1.9 Meat/Poultry/Fish**(i) Raw, without bone: Ration per toddler: 70 - 80g**

OR

(ii) Raw, with bone: Ration per toddler: 90 - 100g

- Portion sizes for meat, fish and poultry:

TYPE OF MEAT	SIZE OF SERVED PORTIONS	PURCHASE WEIGHT	NUMBER OF PORTION PER kg
MEAT WITHOUT BONE			
Mince meat, lean	25g	35g	28
Pot or oven Roast	25g	50g	20
Beef, mutton or pork	25g	35g	20
<i>Stewing meat</i>			
Beef, mutton or pork	25g	40g	25
Steak	25g	40g	25
Sausage	25g	40g	25
Liver or other organ meat	25g	30g	33
MEAT WITH BONE			
Leg, mutton or pork	25g	65g	15
Chops, mutton or pork	50g (1 chop)	70g	14
Chuck	50g	70g	14
Forequarter	50g	70g	14
PROCESSED MEAT			
Polony, Vienna	25g	25g	40
FISH (frozen, without batter)			
Haddock fillets, with skin	25-30g	40g	25
Hake fillets, without skin	25g	40g	25
Hake portions, without skin	20g	35g	28
POULTRY			
Chicken breast	30g	50g	20
Chicken thigh	30g	50g	20
Turkey	25g	40g	25

(iii) Guidelines for uniform menus

- In order to ensure uniformity in respect of menus, the following guide show how many times per week meat/ fish/ poultry and eggs may be repeated. The guidelines fit in with the ration scales and include breakfasts, lunches and suppers:

TYPE OF FOOD	NUMBER OF SERVINGS PER WEEK
Eggs (boiled, fried, scrambled, or poached)	2 - 3
Sausage	2

Fish	3
Poultry	3
Minced meat	3
Roast (<i>e.g. roast chicken or fore-quarter cut</i>)	1
Meatless dish (<i>e.g. cheese dish</i>)	2 - 3
Stew	3
TOTAL	21 Meals

- Meat, especially minced meat, can be extended with TVP (*textured vegetable protein*) or dried legumes in the amounts as shown on the ratio scale.
- Roasts can be alternated or replaced with stews.
- Polony or processed cold meats can be served in summer in place of stews.

6.3.1.10 Fruit: Ration per Toddler: 100 - 200 g/day

- The ration scale allows one portion of fruit per toddler per day.
- Portion sizes for fruit:

FRUIT	SIZE OF SERVED PORTION	PURCHASE WEIGHT	NUMBER OF PORTIONS PER kg AS PURCHASED
APPLES Fresh, small	1	115 - 120g	8 - 9
APRICOTS Fresh, medium	2 x 35g	70g	14
BANANAS Fresh, medium	1	100 - 120g	8 - 10
GRAPEFRUIT	1 half	150g	7
GRAPES	1 bunch=100g	120g	8
GUAVAS Fresh, small Medium	2 x 50g 1 x 85g	100g 85 - 100g	10 10 - 12
ORANGES Fresh, medium	1	140 - 150g	6 - 7
PEACHES Fresh, medium	1	115g	8 - 9
PEARS Fresh, small	1	90 - 110g	10 - 11
PINEAPPLES Fresh, peeled	100 - 110g	200g	5
PLUMS Fresh, medium	2 x 50 - 60g	100 - 120g	8 - 10
SPANSPEK Fresh, peeled	100g	200g	5
WATERMELON Fresh, peeled	90 - 100g	200g	5
PURE FRUIT JUICE OR FRUIT NECTAR	150 ml ready to drink Refer to the instructions on the label for the correct dilution		

- Fresh fruit may be substituted with canned fruit occasionally, but not more than once per week. The following weights can be used for calculating the purchase weight of canned fruit in A10 packs. These weights represent the net weight (*drained weight, choice grade*) of the various types of fruit:

CANNED FRUIT	PORTIONS PER A10 TIN	SIZE OF SERVED PORTION
Apricot halves	1,82kg = 115 - 130 halves	2 x 35g = 70g
Apple pie	2,84kg = 28 x 100g portions	100g
Guavas halves	1,65kg = 27 - 40 halves	2 x 50g = 100g
Pears halves	1,75kg = 30 - 38 halves	2 x 50g = 100g

Peaches	halves	1,82kg = 34 - 36 halves	2 x 50g = 100g
	Slices	1,82kg = 120 - 135 slices	6 - 7 slices
Pineapple	diced	1,82kg = 115 - 130 halves	125ml = 90 - 100g
	Rings	1,87kg = 29 x 65g rings	1 - 2 rings

6.3.2 WEEKLY ALLOWANCES

(i) *Dried Legumes/TVP (Dry): Ration per Toddler: 10 - 20g*

- The quantities per portion for various uses are as follows:
 - Dried legumes in soup/dishes 10-15g
 - Combined with meat 5g
- TVP (*texture vegetable protein*) is used with minced meat dishes as a meat extender. (*see ration scale item 9*).

(ii) *Eggs: Ration per Toddler: 3 - 4*

- Eggs are to be served 3-4 times per week at breakfast. One egg is a portion and is equal to one of the following:
 - Frozen scrambled egg mixture 50g
 - Egg powder 13g
- 1 egg for cooking purposes

(iii) *Cheese: Ration per Toddler: 50g*

- The quantities for different uses are as follows:
 - Cheese on its own (*for breakfast*) 10g
 - Meatless dish (main course for light meal) 10g

(iv) *Sandwich Spreads*

- The quantities allowed are as follows:
 - Peanut butter 10g
 - Meat/vegetable spread 2,5g

6.3.3 KITCHEN COMMODITIES FOR TODDLERS 1 - 3 YEARS

The quantities of food used to make dishes, sauces, etc. are indicated under item 6.2

6.4 EXAMPLE OF THE NUTRIENT ANALYSIS OF PRUDENT DIET FOR TODDLERS 1-3 YEARS (MALE)

SUBJECT INFORMATION	STATISTICS
Date	31/08/2000
Type	Daily
Reference	Feeding
Sex	Male
Age	1
Weight	9kg
Height	0.71m
BM Index	17.85

MEAL CONSTITUENTS	
Bread/rolls, brown	40g
Oats, rolled or oat-meal, cooked	35g
Maize meal, cooked soft porridge	40g
Potato, mashed (SM, HM)	70g
Pumpkin/squash, Winter CKD + HM	80g
Marmalade	10g
Margarine, hard/brick	5g
Milk, whole fresh, also UHT/longlife	650g
Suger, white granulated	5g
Apple, juice	75g
Beef, minced savoury reg. (tomato and onion)	30g
Egg, boiled	60g

MACRO NUTRIENTS	AMOUNT	RDA	%
Moisture (%)	82.40%		
Energy (kJ)	3 919kJ	2 720	144.08%
Total Protein (g)	42.10g	13.00	323.85%
Plant Protein (g)	6.20g		
Animal Protein (g)	35.80g		
Total Fat (g)	43.20g		
Saturated Fat (g)	19.51g		
Mono-unsaturated Fat (g)	15.53g		
Poly-unsaturated Fat (g)	4.49g		
Total trans Fatty Acids (g)	2.30g		
Fat Ratio (poly/sat)	0.23		
Cholesterol (mg)	364.00mg		
Total Carbohydrates (g)	94.00g		
Fibre (g)	6.70g		
Added Sugar (g)	11.60g		
Total CHO-Sugar (g)	82.60g		
Alcohol (g)	00.00g		
Energy – Protein (%)			17.940%
Energy – Fat (%)			41.558%
Energy – Carbohydrates (%)			42.911%
Energy – Alcohol (%)			00.000%

PRUDENT DIET RECOMMENDATIONS

Energy from Saturated Fat is ABOVE the recommended 10% maximum
Energy from Poly-unsaturated Fat is BELOW the recommended 10% maximum
Energy from Carbohydrates is BELOW the recommended 50% minimum
Cholesterol intake EXCEEDS the recommended 300mg maximum per day
Fibre intake is BELOW the recommended minimum value of 20g per day

WHO RECOMMENDATIONS (% of Recommended Value)

Energy (kJ)	143.92%	of	2 723
Protein (g)	283.50%	of	14.85
Vitamin A (ug)	203.33%	of	300.00
Vitamin D (ug)	56.50%	of	10.00
Thiamin (mg)	206.67%	of	0.30
Riboflavin (mg)	288.00%	of	0.50
Niacin (mg)	87.04%	of	5.40
Folic Acid (ug)	186.67%	of	60.00
Vitamin B12 (ug)	1 500.00%	of	0.30
Vitamin C (mg)	215.00%	of	20.00
Calcium (mg)	173.00%	of	500.00
Iron (mg)	80.00%	of	5.00

MINERALS	AMOUNT	RDA	%
Calcium (mg)	865.00	400.00	216.25%
Iron (mg)	4.00	6.00	66.67%
Magnesium (mg)	161.00	40.00	402.50%
Phosphorus (mg)	932.00	300.00	310.67%
Potassium (mg)	1 866.00	* 500.00	373.20%
Sodium (mg)	806.00	** 2 000.00	40.30%
Zink (mg)	5.76	5.00	115.20%
Copper (mg)	0.45	*** 0.50	90.00%
Manganese (mg)	1.20	*** 0.45	266.67%

* Estimated minimum requirement

** This is not a RDA, but a dietary guideline

*** Estimated safe and adequate daily dietary intake (value is the mean of the range)

VITAMINS	AMOUNT	RDA	%
Vitamin A (RE) (ug)	610	375.00	162.67%
Thiamin (B1) (mg)	0.62	0.30	206.67%
Riboflavin (B2) (mg)	1.44	0.40	360.00%
Niacin (mg)	4.70	5.00	94.00%
Vitamin B6 (mg)	0.642	0.30	214.00%
Folic Acid (ug)	112.00	25.00	448.00%
Vitamin B12 (ug)	4.50	0.30	1 500.00%
Vitamin C (mg)	43.00	30.00	143.33%
Panto-acid (mg)	3.96	*** 2.00	198.00%
Biotin (ug)	29.00	*** 10.00	290.00%
Vitamin D (ug)	5.65	7.50	75.33%
Vitamin E (mg)	4.61	3.00	153.67%

* Estimated safe and adequate daily dietary intake (value is the mean of the range)

FATTY ACID COMPOSITION	AMOUNT
C4 : 0 (g)	0.720
C6 : 0 (g)	0.390
C8 : 0 (g)	0.260
C10 : 0 (g)	0.520
C12 : 0 (g)	0.620
C14 : 0 (g)	2.440
C16 : 0 (g)	9.680
C18 : 0 (g)	4.170
C20 : 0 (g)	0.050
C22 : 0 (g)	0.030
C24 : 0 (g)	0.020
C14 : 1 (g)	0.260
C16 : 1 (g)	0.870
C18 : 1 (g)	14.280
C20 : 1 (g)	0.030
C22 : 1 (g)	0.000
C18 : 2 (g)	3.900
C18 : 3 (g)	0.540
C18 : 4 (g)	0.000
C20 : 3 (g)	0.000
C20 : 4 (g)	0.060
C20 : 5 (g)	0.020
C22 : 5 (g)	0.000
C22 : 6 (g)	0.040

ESSENTIAL AMINO ACIDS	AMOUNT
Isoleucine (g)	2.129
Leucine (g)	3.665
Lysine (g)	2.929
Methionine (g)	1.088
Phenylalanine (g)	1.955
Threonine (g)	1.775
Tryptophan (g)	0.600
Valine (g)	2.463
Arginine (g)	1.987
Histidine (g)	1.102

7 FOOD RATION SCALE FOR BABIES 6 - 12 MONTHS**7.1 DAILY AND WEEKLY ALLOWANCE FOR PATIENTS (*BABIES 4 - 12 MONTHS*)**

ITEM	DAILY ALLOWANCE PER PATIENT SERVING	PORTION SIZE
Brown/whole-wheat bread	30 - 40g	A portion of bread is half a slice (<i>17-20g</i>) and is equivalent to the following: Biscuits/Rusk's 15g Crackers 15g Maize meal, dry (<i>soft or thick</i>) 15 - 25g
Dry cereals Breakfast	30 - 75g 15 - 35g	A portion of breakfast cereal is equivalent to the following: Brown/whole-wheat bread 17 - 20g Corn-flakes 15g Oats, dry 15g Grain sorghum, dry 15g Maize-meal, dry Soft porridge 15g Thick porridge 20g
Light or main meal	15 - 40g	A portion of starch is equivalent to one of the following: Rice/maize/rice/pasta, dry 15g Samp/crushed wheat, dry 25g Maize-meal, dry: thick porridge 50g The starch may be replaced with a starchy vegetable, e.g. potatoes. (<i>Section 7.3</i>)*
Vegetables - fresh as purchased Potatoes/sweet potatoes Other vegetables	50 - 70g 60 - 80g	(<i>Section 7.3</i>)* for portion sizes of potatoes and other vegetables as purchased.
Jam/ Syrup	10g (<i>12,5ml</i>) 5g	A portion of jam is equivalent to one of the following: Jam, portioned 5g (<i>4ml</i>) Syrup 5g (<i>4ml</i>) For cooking purposes
Margarine /cooking oil	5g 2,5g/ml	A portion of margarine is 2,5g (<i>2,5ml</i>) is equivalent to one of the following: Cooking oil 2,5ml Mayonnaise/salad cream/dressing 2,5ml For cooking purposes
Milk Baby formula	375 - 650ml	The range makes provision for younger babies who require more milk and older babies who require less milk
Skim-milk powder	5g	Skim milk is used for cooking purposes
Sugar	5g 5g	A portion of sugar is equivalent to the following: Un-portioned 5g For cooking purposes
Fruit Fresh, as purchased OR Juice or nectar diluted	1 portion (<i>50 - 100g</i>) 10 - 75ml	A portion of fresh fruit in season is equivalent to the purchase weight of one of type of fruit as shown in (<i>Section 7.3</i>)* 75ml fruit juice/nectar may replace a portion of fresh fruit once a week, or 15g fruit juice powder.
Cheese	20g 5g	The quantities for different uses are as follows: Cheese on its own: <i>Cheese:</i> 10g Meatless dish (<i>main course for light meal</i>): <i>Cheese:</i> 10g For cooking purposes
Sandwich spreads Peanut butter Meat/vegetable spread	5g 2,5g	

Meat/poultry/fish Raw, without bone Or Raw with bone	160g	A portion of meat/poultry/fish is equivalent to the purchase weight of the meat/poultry/fish as shown in (Section 7.3)* 30g meat without bone may be replaced with one of the following combinations of TVP (<i>texturised vegetable protein</i>), or dried legumes, and meat: 3g TVP (dry) + 30g meat-raw, with bone 3g TVP (dry) + 25g meat-raw, without bone 6,5g TVP (frozen) + 30g meat-raw, with bone 25g TVP (frozen) + 25g meat-raw, without bone 7,5g legumes + 30g meat-raw, with bone 7,5g legumes + 25g meat-raw, without bone
	175g	
Dried legumes/TVP (dry/frozen)	10 - 20g	The quantities for various uses per portion are as follows: Dried legumes in soup/dishes 10 - 15g Dried legumes or TVP combined with meat 5 - 10g
Eggs	2	One egg is a portion and is equal to one of the following: Frozen scrambled-egg mixture 50g Egg powder 13g
	1	For cooking purposes

NB: The ration scale does not make provision for the iron requirements (as stipulated in the RDA) of babies 6-12 months old, and these babies should receive a suitable iron supplement.

* (Section 7.3) Interpretation of the ration scale, provides information about the use of the ration scale for babies 6-12 months.

7.2 KITCHEN COMMODITIES FOR BABIES 6 - 12 MONTHS

ITEM	WEEKLY PER 100 TODDLERS	BASIS FOR SUBSTITUTIONS
Baking powder	75g	20g baking powder = 5g bicarbonate of soda+10g cream of tartar
Flavouring	20ml	
Jelly powder	350g	100g jelly powder = 10g gelatine OR 100g dessert powder
Colouring and browning	15ml	
Cake flour	2,5kg	100g cake flour = 50g maize meal OR 70g Sago OR 50g custard powder
Herbs and spices	60g	1g of any herb or spice = 1g of a suitable flavouring powder
Salt	1kg	
Meat extract cubes powder	500g	100g meat extract = 100 g sauce powder/soup powder OR 2,5 litre meat stock (<i>made up</i>)

7.3 INTERPRETATION OF THE RATION SCALE FOR BABIES 6 - 12 MONTHS

7.3.1 DAILY ALLOWANCES: FULL NORMAL DIET

7.3.1.1 Brown/Whole-wheat Bread: Ration per Baby: 30 - 40g

- This ration is based on one (1) and a half (1/2) slices of bread per day. A standard loaf will provide 21-25 slices. Half a slice of bread is served at tea-time in the morning and in the afternoon and with supper. For younger babies the bread is omitted initially. When the bread is omitted, the margarine allowance falls away accordingly. A biscuit or rusk may be given instead of the bread as a snack at tea-time in the afternoon.

7.3.1.2 Dry Cereals: Ration per Baby: 30 - 75g

- These include porridge meal, dry cereals, pastas, rice, maize rice and samp.

(i) Breakfast: Ration per baby: 15 - 35g

- A portion of breakfast cereal, dry weight, is equivalent to the following:

Brown/whole-wheat bread	15 - 30g
Corn-flakes	15g
Oats	15g
Grain sorghum	15g
Maize-meal	
Soft porridge	25g
Thick porridge	35g

- Dry breakfast cereals are more expensive than soft porridges. To cut costs baby porridge may be replaced with soft porridge.

(The cultural eating habits of the people in the area must be taken into account)

(ii) Light or main meal: Ration per baby: 15 - 40g

- A portion of starch, dry weight, is equivalent to one of the following:

Rice/maize rice/pasta	25g
Maize-meal: thick porridge	35g

- A portion of starch is also equivalent to a portion of the following starchy vegetables:

Potato/sweet potato	60g (purchase weight)
---------------------	-----------------------

7.3.1.3 Vegetables - Fresh as Purchased**(i) Potatoes/sweet potatoes: Ration per baby: 50 - 70g**

- There are 6-8 potatoes per kilogram, depending on their size. A portion of potato/sweet potato, or other starchy vegetable as purchased, is equivalent to the following:

STARCHY VEGETABLE	SIZE OF SERVED PORTION	PURCHASE WEIGHT	NUMBER OF PORTIONS PER kg
POTATOES			
Fresh, Whole	40 - 45g	50 - 60g	16 - 20
Fresh, diced	35g	45 - 55g	18 - 22
Fresh, mashed	35g	45 - 55g	18 - 22
Dehydrated	40g	10g	100
SWEET POTATOES			
Fresh	40 - 45g	60 - 70g	22 - 25
Dehydrated	50g	15g	66

(ii) Other vegetables: Ration per baby: 60 - 80g

- This allows for two cooked vegetables and one salad to be served daily.
- A portion of vegetables is equivalent to the purchase weight of one of the following:

VEGETABLES	SIZE OF SERVED PORTION	PURCHASE WEIGHT	NUMBER OF PORTIONS AS PURCHASED PER kg
BUTTERNUT			
Fresh	(without skin) 30g	80-85g	12
Pre-prepared	30g	55g	16

CARROTS			
Fresh, with tops	30g	60g	16
Fresh, without tops	30g	40g	25
Frozen	30g	30g	33
Canned	30g	55g	
Dehydrated	30g	5g	200
Pre-prepared	30g	45g	20
GEM SQUASH	<i>(with skin)</i>		
Fresh cooked	30g	70 - 75g	13 - 14
Pre-prepared	30g	50g	18
GREEN PEAS			
Frozen	30g	30g	15 - 22
Canned	30g	30g	
Dehydrated	30g	5g	140
HUBBARD SQUASH			
Fresh	30g	60g	20
Pre-prepared	30g	50g	22
MOROGO			
Dehydrate	30g	5g	200
PUMPKIN			
Fresh, cooked	30g	60g	20
Pre-prepared	30g	50g	22
SPINACH			
Fresh, cooked	30g <i>(without stalks)</i>	70g	14
Fresh, cooked	30g	60g	20
	<i>(end of stalks cut off)</i>		
Dehydrated	30g	5g	180
Pre-prepared	30g	55g	18
TOMATOES			
Salad	25 - 30g	30 - 35g	28 - 33
Canned	According to dish	According to dish	

- The following weights can be used for calculating the purchase weights of canned vegetables in A10 cans. These weights represent the net weight (drained weight, choice grade) of the various vegetables.

CANNED VEGETABLES	PORTIONS PER A10 CAN
Green peas	1,96kg = 30 x 65g
Tomatoes, whole and peeled	1,82kg = 28 x 65g
Carrots	1,82kg = 28 x 65g

7.3.1.5 Jam: Ration per Baby: 15g (12,5ml)

- This is for spreading on bread at supper. The extra 5g is for kitchen use.

7.3.1.6 Margarine/Cooking Oil: Ration per Baby: 7,5g/ml

- Margarine is used for spreading bread. One teaspoon is 5g and is enough to spread one slice of bread.

7.3.1.7 Milk

(i) **Fresh: Ration per baby: 375 - 650ml**

- Milk is used for as listed in table (*Example of milk distribution*):

Early morning	100 - 150ml milk/formula
Breakfast porridge	50ml
Mid-morning	75 - 150ml milk/formula
Lunch	75 - 150ml milk/formula
Supper	75 - 150ml milk/formula
TOTAL	375 - 650ml

(ii) Full cream-milk powder: Ration per baby: 5g (50ml reconstituted)

- The full cream-milk powder can be used for custard, and puddings. To make one litre full cream milk, follow the directions on the package.

7.3.1.8 Sugar: Ration per Baby: 10g

- Example of sugar distribution:

SUGAR IS USED FOR	
Breakfast porridge	1 teaspoon (5g)
Kitchen use	1 teaspoon (5g)
TOTAL	10g

7.3.1.8 Fruit: Ration per Baby: 50 - 100g/day

- Portion sizes for fruit:

FRUIT	SIZE OF SERVED PORTION	PURCHASE WEIGHT	NUMBER OF PORTIONS PER kg AS PURCHASED
APPLES			
Fresh, small	1/2	55 - 60g	18
Canned	50g	50g	
BANANAS			
Fresh, medium	1/2	50 - 60g	20
PEARS			
Fresh, small	1/2	50 - 60g	20
Canned	2 x 50g = 100g	175g	
WATERMELON			
Fresh, peeled	50g	90g	10
PURE FRUIT JUICE OR FRUIT NECTAR	75 ml ready to drink Refer to the instructions on the label for the correct dilution		

- Fresh fruit may be substituted with canned fruit occasionally, but not more than once per week. The following weights can be used for calculating the purchase weight of canned fruit in A10 packs. These weights represent the net weight (*drained weight, choice grade*) of the various types of fruit:

CANNED FRUIT	PORTIONS PER A10 TIN	SIZE OF SERVED PORTION
Apricot halves	1,82kg = 115 - 130 halves	2 x 35g = 70g
Apple pie	2,84kg = 28 x 100g portions	100g
Pears halves	1,75kg = 30 - 38 halves	2 x 50g = 100g
Peaches halves	1,82kg = 34 - 36 halves	2 x 50g = 100g
Slices	1,82kg = 120 - 135 slices	6 - 7 slices

7.3.3 WEEKLY ALLOWANCES

(i) Dried Legumes/Tvp (dry) : Ration per Baby: 10 - 20g

- The quantities per portion for various uses are as follows:
 - Dried legumes in soup/dishes 10-15g
 - Combined with meat 5g

- TVP (*texture vegetable protein*) is used with minced meat dishes as a meat extender (*see ration scale*).

(ii) Eggs: Ration per Baby: 3 - 4

- Eggs are to be served 3 times per week at breakfast. One egg is a portion and is equal to one of the following:
 - Frozen scrambled egg mixture 50g
 - Egg powder 3g
- 1 egg for cooking purposes

(iii) Cheese: Ration per Baby: 20g

- The quantities for different uses are as follows:
 - Cheese on its own (*for breakfast*) 10g
 - Meatless dish (*main course for light meal*) 5g

(iv) Sandwich Spreads

- The quantities allowed are as follows:
 - Peanut butter 5g
 - Meat/vegetable spread 2,5g

(v) Meat/Poultry/Fish

- (a) Raw, without bone: Ration per person: 60g
OR
- (b) Raw, with bone: Ration per person: 175g
- Portion sizes for meat, and poultry:

TYPE OF MEAT	SIZE OF SERVED PORTIONS	PURCHASE WEIGHT	NUMBER OF PORTION PER kg AS PURCHASED
MEAT WITHOUT BONE			
Mince meat, lean	20g	25g	40
Liver	20g	25g	40
POULTRY			
Chicken breast	25g	40g	25
Chicken thigh	25g	40g	25

(vi) Recommended distribution of protein dishes:

TYPE OF FOOD	QUANTITY TO BE USED	NUMBER OF SERVINGS PER WEEK
EGGS		
Eggs	2	Twice
Kitchen use	1	According to recipe
TOTAL PER WEEK	3	2
MEAT/ POULTRY: as purchased		
<i>Main dish:</i>		
Meat without bone (<i>e.g. mince meat</i>)	25g	7 times
Meat with bone (<i>e.g. chicken</i>)	40g	4 times
TOTAL PER WEEK	175g meat without bone 160g meat with bone	11
CHEESE		
Meatless dish for light meal	10g	Once
Kitchen use	15g	According to recipes
TOTAL PER WEEK	25g	2
WEEKLY TOTAL		15

7.3.4 KITCHEN COMMODITIES FOR BABIES

The quantities of food used to make dishes, sauces, etc. are indicated under item 7.2.

8 RECOMMENDED DIETARY ALLOWANCES

RECOMMENDED DIETARY ALLOWANCES^a (revised 1989) (Designed for nutrition of healthy people in the United States)

Category	Age (years) or Condition	Weight (kg) ^b	Height (cm) ^b	Protein (g)	Fat-soluble Vitamins				Water-soluble Vitamins							Minerals						
					Vitamin A (:g RE) ^c	Vitamin D (:g) ^d	Vitamin E (mg α -TE) ^e	Vitamin K (:g)	Vitamin C (mg)	Thiamin (mg)	Riboflavin (mg)	Niacin (mg NE) ^f	Vitamin B ₆ (mg)	Folate (:g)	Vitamin B ₁₂ (:g)	Calcium (mg)	Phosphorus (mg)	Magnesium (mg)	Iron (mg)	Zinc (mg)	Iodine (:g)	Selenium
Infants	0.0-0.5	6	60	13	375	7.5	3	5	30	0.3	0.4	5	0.3	25	0.3	400	300	40	6	5	40	10
	0.5-1.0	9	71	14	375	10	4	10	35	0.4	0.5	6	0.6	35	0.5	600	500	60	10	5	50	15
Children	1 - 3	13	90	16	400	10	6	15	40	0.7	0.8	9	1.0	50	0.7	800	800	80	10	10	70	20
	4 - 6	20	112	24	500	10	7	20	45	0.9	1.1	12	1.1	75	1.0	800	800	120	10	10	90	20
	7 - 10	28	132	28	700	10	7	30	45	1.0	1.2	13	1.4	100	1.4	800	800	170	10	10	120	30
Males	11 - 14	45	157	45	1 000	10	10	45	50	1.3	1.5	17	1.7	150	2.0	1 200	1 200	270	12	15	150	40
	15 - 18	66	176	59	1 000	10	10	65	60	1.5	1.8	20	2.0	200	2.0	1 200	1 200	400	12	15	150	50
	19 - 24	72	177	58	1 000	10	10	70	60	1.5	1.7	19	2.0	200	2.0	1 200	1 200	350	10	15	150	70
	25 - 50	79	176	63	1 000	5	10	80	60	1.5	1.7	19	2.0	200	2.0	800	800	350	10	15	150	70
	51+	77	173	63	1 000	5	10	80	60	1.2	1.4	15	2.0	200	2.0	800	800	350	10	15	150	70
Females	11 - 14	46	157	46	800	10	8	45	50	1.1	1.3	15	1.4	150	2.0	1 200	1 200	280	15	12	150	45
	15 - 18	55	163	44	800	10	8	55	60	1.1	1.3	15	1.5	180	2.0	1 200	1 200	300	15	12	150	50
	19 - 24	58	164	46	800	10	8	60	60	1.1	1.3	15	1.6	180	2.0	1 200	1 200	280	15	12	150	55
	25 - 50	63	163	50	800	5	8	65	60	1.1	1.3	15	1.6	180	2.0	800	800	280	15	12	150	55
	51+	65	160	50	800	5	8	65	60	1.0	1.2	13	1.6	180	2.0	800	800	280	10	12	150	55
Pregnant				60	800	10	10	65	70	1.5	1.6	17	2.2	400	2.2	1 200	1 200	300	30	15	175	65
Lactating	1 st 6 mnths			65	1 300	10	12	65	95	1.6	1.8	20	2.1	280	2.6	1 200	1 200	355	15	19	200	75
	2 nd 6 mnths			62	1 200	10	11	65	90	1.6	1.7	20	2.1	260	2.6	1 200	1 200	340	15	16	200	75

^a The allowances, expressed as average daily intakes over time, are intended to provide for individual variations among most normal persons. Diets should be based on a variety of common foods in order to provide other nutrients for which human requirements have been less well defined.

^b Weights and Heights of Reference Adults are actual medians for USA population. The use of these figures does not imply that the height-for-weight ratios are ideal.

^c Retinol equivalents: 1 retinol equivalent=1:g retinol or 6:g β -carotene.

^d As cholecalciferol: 10:g cholecalciferol=400 IU of vitamin D.

^e α -Tocopherol equivalents: 1mg d- α tocopherol=1: α -TE .

^f 1 NE (niacin equivalent) is equal to 1mg of niacin or 60mg of dietary tryptophan.