

Annex 1: Caring for Symptoms Associated with HIV

ILLNESS	DIET	CARE AND NUTRITION PRACTICES
<p>Anorexia (appetite loss)</p>	<ul style="list-style-type: none"> ◆ Try to stimulate appetite by eating favourite foods ◆ Eat small amounts of food more often ◆ Select foods that are more energy dense ◆ Avoid strong smelling foods 	<ul style="list-style-type: none"> ◆ If appetite loss is as a result of illness, seek medical attention for treatment
<p>Diarrhoea</p>	<ul style="list-style-type: none"> ◆ Drink a lot of fluids (soups, diluted fruit juices, boiled water and light herbal teas) to avoid dehydration ◆ Avoid strong citrus fruits (orange, lemon) because they irritate the stomach ◆ Consume foods rich in soluble fibre (millet, banana, peas and lentils) to help retain fluids ◆ Consume fermented foods such as porridges and yogurt ◆ Consume easily digestible foods such as rice, bread, millet, maize porridge, potato, sweet potato and crackers ◆ Eat small amounts of food frequently continue to eat after illness to recover weight and nutrient loss ◆ Eat soft fruits and vegetables such as bananas, squash, cooked and mashed green bananas, mashed sweet potato and mashed carrots ◆ Drink non- fat milk if there is no problem with lactose ◆ Boil or steam foods if diarrhoea associated with fat malabsorption ◆ Avoid or reduce intake of these foods: <ul style="list-style-type: none"> ○ Some dairy products such as milk ○ Caffeine (coffee and teas) and alcohol ○ Fatty foods ○ Fried foods and extra oil, lard or butter ○ Gas forming food such as cabbage, onions, carbonated soft drinks 	<p>Prevention</p> <ul style="list-style-type: none"> ◆ Drink clean boiled water ◆ Wash hands with water and soap before handling, preparing, serving or storing foods ◆ Wash hands with water and soap after using a toilet or latrine or cleaning a child after defecation <p>Treatment</p> <ul style="list-style-type: none"> ◆ Drink more fluids to prevent dehydration. Prepare rehydration solutions using oral rehydration salt packets or a homemade solution from cereals. Go to a health centre if symptoms such as severe dehydration (low or no urine output), fainting, dizziness, shortness of breath, bloody stools, high fever, vomiting, severe abdominal pain or diarrhoea persist for more than 3 days

<p>Fever</p>	<ul style="list-style-type: none"> ◆ Eat soups rich in foods that give energy and nutrients, such as maize, potatoes and carrots ◆ Drink plenty of fluids ◆ Drink teas from lemon, guava and gum tree ◆ Continue to eat small, frequent meals as tolerated 	<ul style="list-style-type: none"> ◆ Drink fluids to prevent dehydration, particularly clean boiled water ◆ Bathe in cool water ◆ Rest more ◆ Take two panadol, if available, with a meal three times daily (morning, afternoon and evening) ◆ Go to the health centre in case of: ◆ Fever that lasts several days and is not relieved with aspirin, loss of consciousness, severe body pain, Yellow eyes, sever diarrhoea, convulsion and seizure.
<p>Nausea and Vomiting</p>	<ul style="list-style-type: none"> ◆ Eat small and frequent meals ◆ Eat foods such as soups, unsweetened porridge and fruits such as bananas ◆ Eat lightly salty and dry foods such as crackers to calm the stomach ◆ Drink herbal teas and lemon juice in hot water ◆ Avoid spicy and fatty foods ◆ Avoid caffeine (coffee and tea) and alcohol ◆ Drink liquids such as clean boiled water 	<ul style="list-style-type: none"> ◆ Avoid an empty stomach; nausea is worse if nothing is in the stomach ◆ Avoid lying down immediately after eating; wait at least 20 minutes. ◆ avoid vomiting ◆ Rest between meals
<p>Thrush</p>	<ul style="list-style-type: none"> ◆ Eat soft, mashed foods such as carrots, scrambled eggs, mashed potatoes, bananas, soups and porridge ◆ Eat cold or room temperature foods- ◆ Avoid spicy, salty or sticky foods; these may irritate mouth sores ◆ Avoid sugary foods; these cause yeast to grow ◆ Avoid strong citrus fruits and juices that may irritate mouth sores ◆ Avoid alcohol and drink plenty of fluids 	<ul style="list-style-type: none"> ◆ Seek medical attention for treatment ◆ If a spoon or cup is available, use it to eat small amounts of foods ◆ Tilt head back when eating to help with swallowing ◆ Rinse mouth with boiled warm salty water after eating to reduce irritation and keep infected areas clean so yeast cannot grow
<p>Constipation</p>	<ul style="list-style-type: none"> ◆ Eat more foods that are high in fibre, such as maize, whole wheat bread, green vegetables and washed fruits with the peel ◆ Drink plenty of liquids ◆ Avoid processed or refined foods 	<ul style="list-style-type: none"> ◆ After using cleansing practices such as enemas and medications ◆ Drink plenty of fluids, including boiled water

<p>Anaemia</p>	<ul style="list-style-type: none"> ◆ Eat more iron rich foods such as animal products (eggs, fish, meat, liver), green leafy vegetables (collard greens, spinach), legumes (beans, lentils, groundnuts), nuts, oil seeds and fortified cereals ◆ Take iron supplements 	<ul style="list-style-type: none"> ◆ If available, take one iron tablet once a day with some food. Take with a source of Vitamin C such as tomatoes or orange juice to help with absorption ◆ Drink fluids to avoid constipation ◆ Treat malaria and hookworm
<p>Muscle Wasting</p>	<ul style="list-style-type: none"> ◆ Increase food intake by increasing quantity of food and frequency of consumption ◆ Improve quality and quantity of foods by providing a variety of foods ◆ Increase protein in diet ◆ Increase intake of starchy foods in cereals and other staples ◆ Eat small, frequent meals 	<ul style="list-style-type: none"> ◆ Do regular weight bearing exercise to build muscles
<p>Bloating or heartburn</p>	<ul style="list-style-type: none"> ◆ Eat small, frequent meals ◆ Avoid gas forming foods (cabbage, soda) ◆ Drink plenty of fluids 	<ul style="list-style-type: none"> ◆ Eat long enough before sleeping so food can digest

<p>Tuberculosis</p>	<ul style="list-style-type: none"> ◆ Consume foods high in protein, energy, iron and vitamins 	<ul style="list-style-type: none"> ◆ Seek medical attention immediately ◆ Consult medical personnel about taking food with medications ◆ If taking Isoniazid for treatment, take a vitamin B6 supplement to avoid deficiency of this micronutrient
<p>Loss of taste abnormal taste</p>	<ul style="list-style-type: none"> ◆ Use flavour enhancers such as salt, spices, herbs ◆ and lemon ◆ Chew food well and move it around in mouth to Stimulate receptors 	

Annex 2: Food Recommendations and Possible Side effects for Common Medications used by PLHIV

DRUG NAME	FOOD RECOMMENDATION	AVOID	POSSIBLE SIDE EFFECTS
Efavirenz (EFZ)	<ul style="list-style-type: none"> ◆ Can be taken without regard to meals ◆ Moderate on amount of fat in meal (it increases absorption to potentially harmful levels) 	<ul style="list-style-type: none"> ◆ Alcohol ◆ St. John's Wort* 	<ul style="list-style-type: none"> ◆ Anorexia, nausea, vomiting, diarrhoea, mouth sores, fatigue, dizziness, rash, drowsiness, sleep disturbances ◆ Elevated blood cholesterol and triglyceride levels ◆ Dyspepsia, abdominal pain, flatulence
Nevirapine (NVP)	<ul style="list-style-type: none"> ◆ Can be taken without regard to food 	<ul style="list-style-type: none"> ◆ St. John's Wort* 	<ul style="list-style-type: none"> ◆ Nausea, vomiting, fatigue, rash, drowsiness, abdominal pain, stomatitis ◆ High hepatotoxicity
Lamivudine(3TC)	<ul style="list-style-type: none"> ◆ Can be taken without regard to food 	<ul style="list-style-type: none"> ◆ Alcohol 	<ul style="list-style-type: none"> ◆ Well tolerated drug
Stavudine (d4T)	<ul style="list-style-type: none"> ◆ Can be taken without regard to food 	<ul style="list-style-type: none"> ◆ Limit the Consumption of alcohol 	<ul style="list-style-type: none"> ◆ Nausea, headache, dizziness, diarrhea, insomnia, anorexia, anaemia, stomatitis, fever ◆ Pancreatitis, chills and fever, peripheral neuropathy, bone marrow suppression ◆ Increase the risk of lipodystrophy
Zidovudine (ZDV/ AZT)	<ul style="list-style-type: none"> ◆ Take without food but if it causes nausea or stomach problems, take with a low fat meal ◆ May require zinc and copper supplementation 	<ul style="list-style-type: none"> ◆ Alcohol ◆ Avoid giving to a patient with an Hb of < 8 g/dl (Children) < 9.5 gm/dl (adults) 	<ul style="list-style-type: none"> ◆ Anorexia, anemia, nausea, vomiting, fatigue, constipation, mouth sores, dizziness, fever ◆ Bone marrow suppression, headache, dyspepsia, dyspnoea, insomnia, muscle pain and rash
Didanosine (ddl)	<ul style="list-style-type: none"> ◆ Take on empty stomach (30 minutes before or 2 hours after eating) ◆ Take with water only (food reduces its absorption) 	<ul style="list-style-type: none"> ◆ Alcohol ◆ Grape fruit juice ◆ Antacids containing aluminum or magnesium 	<ul style="list-style-type: none"> ◆ Nausea, dizziness, diarrhea, anorexia, vomiting, dry mouth, loss of taste, constipation, anemia ◆ Headache, insomnia, stomatitis, fever, pancreatitis
Tenofovir (TDF)	<ul style="list-style-type: none"> ◆ Take with a meal 	<ul style="list-style-type: none"> ◆ Alcohol 	<ul style="list-style-type: none"> ◆ Abdominal pain, headache, fatigue, dizziness

Indinavir (IDV)	<ul style="list-style-type: none"> ◆ Take on empty stomach (1 hour before or 2 hours after a meal or with a light non fat meal) ◆ Take with plenty of water to avoid kidney problems- at least 1.5litres of fluids daily to prevent kidney stones 	<ul style="list-style-type: none"> ◆ Grape fruits ◆ St.John Wort* 	<ul style="list-style-type: none"> ◆ Nausea, dizziness, diarrhea, insomnia, vomiting, abdominal pain, regurgitation, fever ◆ Pancreatitis, muscle pain, nasal symptoms, headache, ascites, stomatitis ◆ May increase the risk of lipodystrophy (increased blood fats)
Lopinavir (LPV)	<ul style="list-style-type: none"> ◆ Can be taken without regard to food ◆ May be taken with a high fat meal for better absorption 	<ul style="list-style-type: none"> ◆ St.Johns Wort* 	<ul style="list-style-type: none"> ◆ Abdominal pain, diarrhea, headache, weakness, nausea, change in taste, anorexia, high blood sugar, rash ◆ May increase the risk of lipodystrophy (increased blood fats)
Nelfinavir (NFV)	<ul style="list-style-type: none"> ◆ Take with a light meal or light snack (the suspension for children can be mixed with milk, water, porridge). ◆ To increase absorption, take with meal containing <15g fat 	<ul style="list-style-type: none"> ◆ St.Johns Wort* 	<ul style="list-style-type: none"> ◆ Diarrhea, flatulence, nausea, abdominal pain, rash ◆ May increase the risk of lipodystrophy
Ritonavir (RTV)	<ul style="list-style-type: none"> ◆ Take with a meal or within 2 hours after a full meal for better absorption ◆ Palatability can be improved by mixing with milk, honey, or yogurt 	<ul style="list-style-type: none"> ◆ St.John Wort* 	<ul style="list-style-type: none"> ◆ Nausea, anorexia, dizziness, diarrhea, diabetes, fever, numbness around the mouth, vomiting, weakness ◆ Insomnia, headache ◆ Increases the risk of lipodystrophy, pancreatitis and hepatitis
Saquinavir (SQV)	<ul style="list-style-type: none"> ◆ Take with a meal or light snack ◆ Take within 2 hours of a high fat and calcium meal 	<ul style="list-style-type: none"> ◆ St John Wort* 	<ul style="list-style-type: none"> ◆ Mouth ulceration, taste changes, nausea, vomiting, abdominal pain, diarrhea, constipation, flatulence ◆ Rash, weakness, headache, insomnia, hepatic impairment ◆ Increases risk of Lipodystrophy and high blood sugars
Sulfonamides: Sulfamethoxazole, Cotrimoxazole	<ul style="list-style-type: none"> ◆ Take with food 		<ul style="list-style-type: none"> ◆ Nausea, vomiting, abdominal pain
Rifampin (treatment of TB)	<ul style="list-style-type: none"> ◆ On an empty stomach one hour before or two hours after meals 	<ul style="list-style-type: none"> ◆ Alcohol 	<ul style="list-style-type: none"> ◆ Nausea, vomiting, diarrhea, loss of appetite

Isoniazid (treatment of TB)	<ul style="list-style-type: none">◆ Take one hour before or two hours after meals◆ Supplement with 10mg vitamin B6 daily (to prevent peripheral neuropathy and anemia)	<ul style="list-style-type: none">◆ Alcohol	<ul style="list-style-type: none">◆ Anorexia, diarrhea, may cause reactions with foods such as bananas, beer, avocados, liver, smoked fish, yeast, yoghurt◆ May interfere with Vitamin B6 metabolism
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Annex 3: Guide to Calorie Intake

This is to help the patient with knowledge of types of foods available and to help with choosing variety.

Note: 1 cup = 250 mls, ½ cup = 125 mls, 1 tbs = 15 ml, 1 tsp = 5 ml,

Starches:

All starches listed below are equivalent to 1 serving (80 kcal)

1/3 Cup Arrow Roots	½ Cup Corn (Maize)	½ Cup Porridge
1 Slice WM Bread	½ Cup Cooked Bananas	½ Cup Rice
½ Chapatti	½ Cup Dried Beans	½ Cup Sweet Potatoes
1/3 Cup Cassava	½ Cup Irish Potatoes	1/3 Cup Ugali
½ Cup Cereals	½ Cup Pastas	

Vegetable:

1 serving (25 kcal) = 1 cup raw leafy green vegetables or ½ cup cooked vegetables or ¾ cup vegetable juice

Amaranth	Beetroot	Celery	Green
Pepper	Broccoli	Chives	Leeks
Brussels sprouts	Courgette	Lettuce	Cabbages
Cucumber	Mushrooms	Capsicum	French Beans
Spinach	Carrots	Green Peas	Sukuma Wiki (Kales)
Tomatoes	Turnips	Indigenous vegetables	

Fruits

1 serving (60 kcal) = ½ cup juice or 1 cup cut fruit

Apples	Grapes	Passion fruit	Water melon	Sultanas
Apricots	Grapefruit	Paw paw	Sweet melon	All dried fruits
Bananas	Guavas	Pears	Berries	
Loquats	Plums	Cherries	Mangoes	
Pineapple	Dates	Oranges	Small fruits	

Dairy

1 serving = 80 kcals

30g Cheese (1% fat)	1 cup fresh milk (0.5 % fat)
Ice cream (¼ cup, 75 ml or 1 scoop)	1 cup yoghurt
1 cup fermented milk (0.5 % fat)	

Proteins

All the proteins listed below are equivalent to 1 serving (75 kcal)

- A palm size of fish (other seafood 30g), 6 small cubes of beef or pork or any kind of meat
- 1 small piece of chicken without skin (a leg, thigh or breast)
- 2 table spoons peanut butter and nuts or seeds
- ½ cup fresh beans
- ½ cup Herrings (Omena)

½ Cup Chitterlings (Matumbo)

1 egg (adults should not eat more than three eggs per week, they should be preferably boiled)

½ Cup Roasted Nuts

Processed meats are not recommended because of the high sodium and fat content (e.g. Sausages, Bacon, and Salami etc)

Fats, Oils and Sugars (use sparingly)

Avocado, Butter, Cakes, cookies, Candy's, Chocolates, Nuts, Margarine, Fats, Oils, Sweets, Sour cream

Free foods (foods you can eat as much as you want)

Black tea/coffee/cocoa

Garlic

Natural unprocessed spices

Chilli

Ginger

Okra

Coriander

Lemon

Onions

Note: the calorie allowance depends on your age, gender and physical activity, patients should not count calories unless they understand.

Annex 4: Herbs and Spices Commonly used in Kenya

Herbs and spices can improve digestion, stimulate appetite and preserve foods. A list of herbs and the beneficial effects claimed by people living with HIV/AIDS are given in the table opposite. **There is no scientific evidence that these actually work. You must warn the patient about this.**

HERB	BENEFITS FOUND BY SOME PEOPLE LIVING WITH HIV/AIDS	HOW TO USE
Aloe	Helps to relieve constipation	Use as extract; boil and drink the concentrated water. To be used in limited amounts; stop immediately if it causes cramps or diarrhoea
Basil	Helps to relieve nausea and aid digestion; has an antiseptic function for mouth sores	Add to food to treat nausea and digestive problems. Use as gargle for mouth sores
Calendula	Flower heads have antiseptic, anti-inflammatory and healing function. Helps with infections of the upper digestive tract	Use as a compress to treat infected wounds. Prepare as tea to help digestion
Cardamom	Helps with digestive problems, pain, diarrhoea, nausea, vomiting and loss of appetite	Add to food during cooking or prepare as tea
Cayenne	Stimulates appetite, helps fight infection, heals ulcers and intestinal inflammation	Add a pinch to cooked or raw foods. For an energizing drink add to fruit juice or water
Camomile	Helps digestion and provides relief for nausea	Prepare tea from the leaves and flowers and drink several cups throughout the day
Cinnamon	Good for colds and for weakness after colds or flu. Also used when feeling cold, for diarrhoea and nausea. Stimulates appetite. Gently stimulates digestive juices, encouraging bowel movements	Either add to meals or in tea, particularly ginger cinnamon tea for chesty colds or tuberculosis
Cloves	Stimulate appetite, help weak digestion, diarrhoea, nausea and vomiting	Use in soups, stews, warmed fruit juice and tea
Coriander	Helps to increase appetite and reduce flatulence. Controls bacteria and fungi	Add herb to meals
Eucalyptus	Has an antibacterial function, particularly for lungs and during bronchitis. Eucalyptus oil from leaves increases the blood flow and reduces the symptoms of inflammation	Prepare tea from the leaves or extract
Fennel	Helps to increase appetite, combat flatulence and expel gas	Add as spice to foods or prepare tea from the seeds. Use in limited amounts

HERB	BENEFITS FOUND BY SOME PEOPLE LIVING WITH HIV/AIDS	HOW TO USE
Garlic	Has antibacterial, antiviral and antifungal function, particularly in the gut, intestines, lungs and vagina. Helps digestion and feeling of weakness. Also good for thrush, throat infections, herpes and diarrhoea	Prepare tea or energy drink or use in food
Ginger	Improves digestion, energizes, relieves diarrhoea and stimulates appetite. Used for treating common colds, flu and nausea	Use either as a spice in meals or prepare a ginger tea
Lemon	Is antibacterial and helps digestion	Add lemon juice to food or drinks
Lemon grass	Has a calming effect as well as soothing digestion and alleviating stress	Use as tea
Mint	Has an anti-inflammatory effect and helps digestion	Use as tea or gargle for mouth sores. Chew mint leaves to aid digestion
Neem	Brings down fever	Cut a fresh twig, remove the leaves and boil the bark in water; drink as tea. The bark can also be chewed
Parsley	Reduces intestinal colic. Stimulates stomach secretions and activities and produces a feeling of hunger. The seed is used to remove excess water from the body	Add raw or cooked to food
Peppermint	May help nausea. Reduces colic (abdominal pain and cramps), helps to control diarrhoea and stop vomiting. Used for relieving tension and sleeplessness	Prepare as tea, by boiling the leaves for about ten minutes. Add to food. (Peppermint can easily be grown in the garden and or in a pot near the house)
Thyme	Has antiseptic and antifungal function. Relaxes nervous coughing and increases mucosal secretions. (particularly effective in the gut) Stimulates digestion and the growth of the good intestinal flora in the gut	Use as gargle or mouthwash, as a vaginal douche or as tea
Turmeric/ yellow root	Digestive aid, antiseptic and antioxidant	Use powdered in rice, cereals, etc.

Annex 5: Micronutrients, their Roles and Sources

MICRONUTRIENT	ROLE	SOURCE
Vitamin A	Makes white blood cells - essential for vision, healthy skin and mucosa, teeth and bone development. Protects against infection associated with accelerated HIV progression, increased adult mortality, increased mother to child transmission, higher infant mortality and child growth failure	All yellow and orange fruit and vegetables, dark green leafy vegetables, alfalfa, liver, oily fish, dairy products and egg yolks
Thiamine Vitamin B₁	Important for energy metabolism, supports appetite and nervous, system functions	Whole-grain cereals, beans, meat and poultry and fish
Riboflavin Vitamin B₂	Important for energy metabolism, supports normal vision, health and integrity of skin	Milk, yoghurt, meat, green leaves and whole-grain cereals
Niacin Vitamin B₃	Essential for energy metabolism, supports health and integrity of skin, nervous and digestive systems	Milk, fish, eggs, meat, poultry, peanuts, whole-grain cereals
Vitamin B₆	Facilitates metabolism and absorption of fats and proteins, helps to make red blood cells	Sweet potatoes, white beans, maize, avocados, cabbage, whole-grain cereals, seeds, Brazil nuts, walnuts, eggs, leafy green vegetables, alfalfa, bananas, legumes, meat and fish
Folate	Required for building new cells, especially red blood cells and gastrointestinal cells	Liver, red meat, green leafy vegetables, fish, oysters, legumes, groundnuts, oilseeds, whole-grain cereals, egg yolks and avocados
Vitamin B₁₂	Important for new cell development and maintenance of the nerve cells	Red meat, fish, poultry, seafood, sardines, cheese, eggs, milk, whole-grain cereals and seaweed
Vitamin C	Helps the body to use calcium and other nutrients to build bones and blood vessel walls. Increases non-heat iron absorption. Increases resistance to infection and acts as an antioxidant. Important for protein metabolism	Citrus fruits (such as baobab, guava, oranges and lemons), cabbage, green leaves, tomatoes, sweet peppers, potatoes, yams and cooking plantains. Vitamin C is lost when food is cut up, reheated or left standing after cooking

MICRONUTRIENT	ROLE	SOURCE
Vitamin E	Protects cell structures and facilitates resistance to disease	Leafy vegetables, vegetable oils, peanuts, egg yolks, dark green vegetables, nuts and seeds, whole-grain cereals
Calcium	Builds strong teeth and bones Aids heart and muscle functions, blood clotting and pressure and immune defences.	Milk, green leaves, shrimps, dried fish (with bones), nuts, beans and peas
Iodine	Ensures the development and proper functioning of the brain and the nervous system	Fish, seafood, milk and salt with iodine
Iron	Transports oxygen to the blood, eliminates old red blood cells and builds new cells	Red meat, poultry, liver, fish, seafood, eggs, peanuts, beans, some cereals, green leafy vegetables, seeds, whole-grain cereals, dried fruit and alfalfa
Magnesium	Strengthens the muscles and is important for proper functioning of the nervous system. Involved in bone development and teeth maintenance	Cereals, dark green vegetables, seafood, nuts and legumes
Selenium	Prevents impairment of the heart muscle	Seafood, liver, meat, carrots, onions, milk, garlic, alfalfa, mushrooms and whole-grain cereals
Zinc	Reinforces the immune system, facilitates digestion and transports vitamin A	Meat, chicken, fish, cereals, leafy green vegetables, seafood, oysters, nuts, pumpkin seeds, milk, liver, whole-grain cereals, egg yolks, garlic and legumes

Annex 6: Micronutrient Requirements for Adults A

MICRONUTRIENT	NON PREGNANT, NON LACTATING WOMEN	PREGNANT WOMEN	LACTATING MOTHERS	MEN
Vitamin A (µg RE)	500	800	850	600
Vitamin B ₁ (mg)	1.1	1.4	1.5	1.2
Vitamin B ₂ (mg)	1.1	1.4	1.6	1.3
Vitamin B ₃ (mg)	14	18	17	16
Vitamin B ₆ (mg)	1.3	1.9	2.0	1.3
Vitamin B ₁₂ (µg)	2.4	2.6	2.8	2.4
Vitamin C (mg)	45	50	70	45
Vitamin D (µg)	5	5	5	5
Vitamin E (mg)	5	7.5	7.5	10
Vitamin K (µg)	55	55	55	65
Calcium (mg)	1000	1200	1000	1000
Iodine (µg)	110	200	200	130
Iron ^b (mg)	20	^c	32	9
Zinc ^d (mg)	6.4	1 st trimester 3.4	0–3 months 5.8	9.4
		2 nd trimester 4.2	4–6 months 5.3	
		3 rd trimester 6.0	7–12 months 4.3	
Magnesium (mg)	220	220	270	260
Folic acid (µg)	400	600	500	400
Selenium (µg)	26	42	30	34

Source: Food and Agricultural Organization of the United Nations and World Health Organization: Human vitamin and mineral requirements. Report of a joint FAO/WHO consultation. Bangkok, Thailand 1998.

NB: Bioavailability is the degree to which a nutrient is absorbed or becomes available at the site of physiological activity after intake.

^a Based on a 65 kg man and 55 kg woman.

^b Based on 15% bioavailability

^c It is recommended that iron supplements in tablet form be given to all pregnant women because of the difficulties in correctly evaluating iron status in pregnancy. In the non-anaemic pregnant woman, daily supplements of 60 mg of iron (e.g. as ferrous sulphate) given during the second half of pregnancy are adequate.

^d Based on high dietary bioavailability.

Annex 7: Micronutrient Requirements for Children

Target micronutrient	0-3 months	4-6 months	7-9 months	10-12 months	1-3 yrs	4-6 yrs
Vitamin A (µg RE)	375	375	400	400	400	450
Vitamin B ₁ (mg)	0.2	0.2	0.3	0.3	0.5	0.6
Vitamin B ₂ (mg)	0.3	0.3	0.4	0.4	0.5	0.6
Vitamin B ₃ (mg)	2	2	4	4	6	8
Vitamin B ₆ (mg)	0.1	0.1	0.3	0.3	0.5	0.6
Vitamin B ₁₂ (µg)	0.4	0.4	0.5	0.5	0.9	1.2
Vitamin C (mg)	25	25	30	30	30	30
Vitamin D (µg)	5	5	5	5	5	5
Vitamin E (mg)	2.7	2.7	2.7	2.7	5	5
Folic acid (mg)	80	80	80	80	160	200
Vitamin K (µg)	5	5	10	10	15	20
Calcium (mg)	300	300	400	400	500	600
Iodine (µg)	15	15	135	135	75	110
Iron (mg)	^a	^a	^a	10	6	6
Zinc ^b (mg)	2.8	2.8	4.1	4.1	4.1	5.1
Magnesium (mg)	26	26	53	53	60	7.3
Selenium (µg)	6	6	10	10	17	21

Source: Food and Agricultural Organization of the United Nations and World Health Organization: Human vitamin and mineral requirements. Report of a joint FAO/WHO consultation. Bangkok, Thailand 1998.

NB: Bioavailability is the degree to which a nutrient is absorbed or becomes available at the site of physiological activity after intake.

^a Neonatal iron stores are sufficient to meet the iron requirement for the first six months in full term infants. Premature infants and low birth weight infants require additional iron. Based on 15% bioavailability.

^b Based on high dietary bioavailability