

Annexes

Annex 3.1: Energy and Protein Requirements

Group of people	HIV negative	HIV Positive ¹			Proteins requirement (g/day)
	Energy requirement (kcal/day)	Asymptomatic Energy requirement (kcal/day)		Symptomatic Energy requirement (kcal/day)	
		10% extra	Energy	20% - 30% extra	Energy
Adults					
Male (Light activity)	2580	260	2840	520 - 780	3100-3360
Male (Moderate activity)	2780	280	3060	560 - 840	3340-3620
Female (Light activity)	1990	200	2190	400 - 600	2390-2590
Female (Moderate activity)	2240	220	2460	440 - 660	2680-2900
Pregnant women	2280 (290 extra)	230	2510	500 - 750	2780-3030
Lactating women	2490 (500 extra)	250	2740	540 - 810	3030-3300
Children²				20% extra	
Boys					
6-11 months	760-970	80-100	840-1070	150 - 190	910-1160
1-3 years	1200-1410	120-140	1320-1550	240 - 280	1440-1690
2-5 years	1410-1690	140-170	1550-1860	280 - 340	1690-2030
5-10 years	1810-2150	180-220	1990-2370	362 - 430	2170-2580
10-14 years	2500-2800	250-280	2750-3080	500 - 560	3000-3360
15-18 years	3000-3100	300-310	3300-3410	600 - 620	3600-3720

Girls							
6-11 months	720-910	70-90	790-1000	140 - 180	8	60-1090	10
1-3 years	1140-1310	110-130	1250-1440	230 - 260		1370-1570	25
2-5 years	1310-1540	130-150	1440-1690	260 - 310		1570-1860	26
5-10 years	1630-1880	160-190	1780-2070	330 - 380		1960-2260	35
10-14 years	2300-2450	230-250	2530-2700	460 - 490		2760-2940	62
15-18 years	2340-2500	230-250	2570-2750	470 - 500		2810-3000	65

Source: Energy and protein requirements. Report of a Joint FAO/WHO/UNU Expert Consultation. WHO Technical Report Series, No. 724, 1985. Garrow JS and James WPT (editors), Human nutrition and dietetics. Churchill Livingstone 9th edition, 1993

NB: Energy and protein requirement values may vary slightly among different sources.

¹HIV-infected adults may require increased protein and micronutrient intake, but research has not yet proven this.

²Children figures (FAO/WHO) include an extra 5% energy for desirable level of physical activity.

Annex 3.2: Important Micronutrients

Micronutrient	Sources	Functions	Markers of Deficiency
Vitamin A	Full-cream milk, fish oil, eggs, liver, carrots, mangos, papaya, pumpkin, yellow sweet potatoes, green leafy vegetables.	Maintenance of epithelial cells, mucous membranes and skin, immune system function, ensures good vision and bone growth.	Poor dark adaptation, night blindness, growth failure, reduced resistance to infection.
Vitamin B₁ (Thiamine)	Whole-grain cereals, meat, poultry, fish, liver, milk, eggs, oil, seeds, and legumes.	Energy metabolism, supports appetite and central nervous system functions	Beriberi, muscle weakness, anorexia, oedema, enlarged heart, confusion.
Vitamin B₂ (Riboflavin)	Milk, eggs, liver, meat, fish, yogurt, green leaves, whole-grained cereals, and legumes.	Energy metabolism supports normal vision, health and integrity of skin.	Inflammation of the tongue, angular stomatitis, oedema and hyperaemia of pharyngeal.
Vitamin B₃ (Niacin)	Milk, eggs, meat, poultry, fish, peanuts, whole-grained cereals, unpolished rice, mushrooms.	Energy metabolism supports health and integrity of skin, nervous and digestive systems.	Pellagra, (3D's – Dermatitis, Diarrhoea, Dementia)
Vitamin B₆ (Pyridoxine)	Legumes, potatoes, meat, fish, poultry, watermelon, oil seeds, maize, avocado, broccoli, green leafy vegetables.	Metabolism and absorption of fats and proteins, converts tryptophan to niacin, helps to make red blood cells.	Inflammation of the tongue, lesions on the lips and corners of the mouth, peripheral neuropathy.
Vitamin B₁₂ (Cobalamin)	Meat, fish, poultry, shellfish, cheese, eggs, milk	Required for synthesis of new cells, maintenance of nerve cells, metabolism of fatty acids and amino acids.	Anaemia, inflammation of the tongue, degeneration of peripheral nerves, skin hypersensitivity, dementia weakness and confusion.
Vitamin C (Ascorbic acid)	Citrus fruits (guava, oranges etc); vegetables such as cabbage, green leaves tomatoes, peppers; Potatoes, yams and fresh milk.	Antioxidant, helps the body to use calcium and other nutrients to build bones and blood vessel walls, important for protein metabolism, increases non-heme iron and selenium absorption.	Scurvy, poor appetite, fatigue, retarded wound healing, bleeding gums.

Micronutrient	Sources	Functions	Markers of deficiency
Vitamin E (Tocopherol)	Liver, milk fat, peanuts, green vegetables, corn oil, vegetable oils, whole grain products, egg yolk, nuts, soya, sunflower seeds, cotton seeds, coconut, tomatoes, sweet potatoes	Protects red and white blood cells membranes (antioxidant), DNA synthesis, stimulates the immune system.	Anaemia in infants Abnormality of nerves and muscles, irritability, oedema.
Zinc	Organ meats, fish, poultry, eggs, whole grain cereals, legume, nuts, milk, yoghurt, vegetables, corn, guavas, pumpkin seeds,	Important for the function of many enzymes (antioxidant), involved in making genetic material, immune system function, smell and taste acuity, wound healing, important for growth and development,	Reduced resistance to infection, skin ulceration, stunted growth.
Selenium	Meat, eggs, seafood, whole grains, chicken liver, cooked sunflower seeds, plants grown in selenium rich soil.	Antioxidant, prevents the impairing of heart muscles, synthesis of glutathione peroxidase, phagocytic functions.	Reduced resistance to infection, joint deformities in children, damage to heart and skeletal muscles, lightening of skin and hair pigmentation.
Iron	Red meat, liver, fish, poultry. Eggs, legumes, peanuts, cereals and dried fruits. Vitamin C, heme iron foods and fermented foods increase non-heme iron absorption.	Synthesis of haemoglobin, energy metabolism and utilization, antioxidant.	Anaemia
Folate	Liver, green leafy vegetables, fish, legumes, groundnuts, oil seeds.	Synthesis of red blood cells, gastrointestinal cells and DNA.	Anaemia, neural tube defects in newborns.

Annex 3.3: Micronutrient Requirements for Adults ^a

Target 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 2 nd trimester 4.2 3 rd trimester 6.0	0–3 months 5.8 4–6 months 5.3 7–12 months 4.3	9.4
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 37 mg of iron (e.g. as ferrous sulphate) given during the second half of pregnancy are adequate.

^d Based on high dietary bioavailability.

Annex 3.4: Micronutrient Requirements for Children

Target micronutrient	0-3 months	4-6 months	7-9 months	10-12 months	1-3 years	4-6 years
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

Annex 3.5: Summary of Energy and Protein Values of Commonly Consumed Foods in Kenya

	Common foods	Energy, Kcal per 100 g	Protein g per 100 g	Possible consumption amount per meal (g)	Nutrient output per meal	
					Energy, Kcal	Protein, g
Cereals	Whole maize meal	370	9	50	185	5
	Maize grain	370	9	50	185	5
	Rice	359	8	75	270	6
	Wheat flour (Home baking)	340	11	50	170	6
	Wheat whole grain	334	17	50	167	9
	Millet	336	9	60	202	6
	Sorghum	306	8	60	183	5
Roots and tubers	Cassava	375	2	75	281	2
	Arrow roots	125	2	75	94	2
	Sweet potatoes	131	6	75	98	6
	Irish/English potatoes	81	2	60	49	1
	Banana raw (matoke)	109	1	60	65	1
Others	Cane sugar	375	-	20	75	-
	Cooking fat	900	-	20	180	-
Animal source foods	Fish fillet	244	72	50	122	36
	Meat (beef)	180	20	75	135	15
	Chicken	163	25	75	122	19
	Egg	154	12	100	154	12
	Cow whole milk	73	3	200 mL	150	6
Plant source food	Green grams	352	24	50	176	12
	Lentils	350	24	50	175	12
	Beans	347	18	50	173	9
	Cow peas	297	23	50	151	12
	Soya	429	30	50	215	15
	Pigeon peas	399	23	50	199	11
Fruits	Avocado	128	1	100	128	1
	Banana ripe	94	1	50	47	1
	Oranges	89	1	40	36	-
	Passion	87	1	40	35	-
	Mangoes	60	1	60	36	-
	Pawpaw	32	0.4	40	12	0.2
Nuts and seeds	Ground nuts	554	10	50	277	5
	Coconut	544	6	50	314	17
	Cashew nuts	569	21	50	285	11
	Simsim	544	20	50	272	10
Vegetables	Spinach	32	3	200	64	6
	Cabbage	24	2	150	36	3
	Kales (Sukuma wiki)	52	4	150	73	6
	Cow peas leaves	43	6	100	43	6
	Amaranth (terere)	45	5	100	45	5
	Pumpkin leaves	36	5	100	36	5

Adapted from: Sehmi JK. National food composition tables and the planning of satisfactory diets in Kenya. Ministry of Health, Government of Kenya, 1993

Annex 4.1: Estimation of Z-Score Using the NCHS/ WHO Reference Curve

1. Weight for age all ages
2. Length for age < 24 months
3. Weight for length < 24 months
4. Height for age > 24 months
5. Weight for height > 24 months (limit 10.5 years)

Calculating Z-scores

$$\text{Z score} = \frac{\text{actual values (weight, height/length)} - \text{expected values (weight, height/length)}}{\text{Standard deviation}}$$

The expected values (weight, height/length) are represented by the 50th percentile.

Standard deviation is estimated from the difference between the 97th and 3rd percentile values divided by four (4) i.e.

$$\text{SD} = \frac{97\text{th percentile} - 3\text{rd percentile}}{4}$$

Example A boy child aged 6 months is 67 cm long and weighs 6.4 kg. Estimating his nutritional status using Z-scores for length-for-age is as follows:

$$\text{Length for age Z score: } \frac{\text{Actual length} - \text{Expected length}}{\text{Standard deviation}} = \frac{67 - 67.8}{2.53} = -0.32$$

The Z-score for length for age = -0.32 hence the child is within the normal range i.e. between 2 and -2 Z – score

Length (cms) for age for children under 24 months

Age in months	Male, percentiles			Standard Deviation	Female, percentiles			Standard Deviation
	3 rd	50 th	97 th		3 rd	50 th	97 th	
0	46.2	50.5	54.8	2.15	45.8	49.9	53.9	2.03
1	49.9	54.6	59.2	2.32	49.2	53.5	57.9	2.18
2	53.2	58.1	62.9	2.43	52.2	56.8	61.3	2.27
3	56.1	61.1	66.1	2.50	54.9	59.5	64.2	2.32
4	58.6	63.7	68.7	2.52	57.2	62.0	66.8	2.40
5	60.8	65.9	71.0	2.55	59.2	64.1	69.0	2.45
6	62.8	67.8	72.9	2.53	61.0	65.9	70.9	2.48
7	64.5	69.5	74.5	2.50	62.5	67.6	72.6	2.52
8	66.0	71.0	76.0	2.50	64.0	69.1	74.1	2.52
9	67.4	72.3	77.3	2.48	65.3	70.4	75.6	2.57
10	68.7	73.6	78.6	2.48	66.6	71.8	77.0	2.60
11	69.9	74.9	79.9	2.50	67.8	73.1	78.3	2.63
12	71.0	76.1	81.2	2.55	69.0	74.3	79.6	2.65
13	72.1	77.2	82.4	2.58	70.1	75.5	80.9	2.70
14	73.1	78.3	83.6	2.63	71.2	76.7	82.1	2.73
15	74.1	79.4	84.8	2.68	72.2	77.8	83.3	2.78
16	75.0	80.4	85.9	2.73	73.2	78.9	84.5	2.83
17	75.9	81.4	87.0	2.77	74.2	79.9	85.6	2.85
18	76.7	82.4	88.1	2.85	75.2	80.9	86.7	2.88
19	77.5	83.3	89.2	2.92	76.1	81.9	87.8	2.93
20	78.3	84.2	90.2	2.97	77.0	82.9	88.8	2.95
21	79.1	85.1	91.2	3.02	77.8	83.8	89.8	3.00
22	79.8	86.0	92.2	3.10	78.7	84.7	90.8	3.03
23	80.6	86.8	93.1	3.13	79.5	85.6	91.7	3.05

Annex 7.1: Sample of Common Herbs and Spices

Name	Benefit	How to use
Aloe vera	<ul style="list-style-type: none"> Relieves constipation Soothing and healing to wounds 	<ul style="list-style-type: none"> Use as extract; boil and drink concentrated water. Stop use if it causes cramps/ diarrhoea. Apply fresh gel on wounds <p>May cause diarrhoea. Use for a maximum of 10 days. Should be avoided during pregnancy.</p>
Cinnamon <i>Cinnamom zeylanicum</i>	<ul style="list-style-type: none"> Relieves nausea, colds and flu Stimulates digestive juices Stimulates appetite Anti-diarrhoeal Antiseptic 	<ul style="list-style-type: none"> Add to meals or teas particularly ginger and cinnamon tea. <p>Should be avoided during pregnancy.</p>
Garlic <i>Allium sativum</i>	<ul style="list-style-type: none"> Antibacterial, antifungal, antiviral effects in gut, intestines, lungs, vagina. Aids digestion Thrush and throat infections 	<ul style="list-style-type: none"> Use in food as spice Prepare tea or energy drink <p>Should not be taken by those on ARV Saquinavir. It reduces efficacy of the ARV</p>
Cloves <i>Eugenia caryophyllus</i>	<ul style="list-style-type: none"> Relieves nausea, vomiting Aids digestion, anti-diarrhoeal Stimulates appetite Mild anesthetic 	<ul style="list-style-type: none"> Use in soups, stews, fruit juice and tea Put a clove near the tooth and keep it in the mouth
Ginger <i>Zingiber officinale</i>	<ul style="list-style-type: none"> Stimulate appetite Relieves diarrhoea Improves digestion Treats common cold, flu, nausea 	<ul style="list-style-type: none"> Use as a spice in meals Use in tea
Lemon	<ul style="list-style-type: none"> Helps digestion Antibacterial effect 	<ul style="list-style-type: none"> Add lemon juice to foods or drinks
Mint	<ul style="list-style-type: none"> Helps digestion Anti-inflammatory effect Relieves mouth sores 	<ul style="list-style-type: none"> Use as a tea Gargle for mouth sores Chew mint leaves to aid digestion
Neem (<i>Mualobaini</i>)	<ul style="list-style-type: none"> Brings down fever 	<ul style="list-style-type: none"> Cut a fresh twig, remove leaves and boil the bark. Drink as tea. Chew the bark
Coriander	<ul style="list-style-type: none"> Increases appetite Reduce flatulence 	<ul style="list-style-type: none"> Add to meals
Peppermint <i>Mentha piperata</i>	<ul style="list-style-type: none"> Relieves nausea Reduces abdominal pain and cramps Controls diarrhoea and vomiting Relieves tension and sleeplessness 	<ul style="list-style-type: none"> Prepare as tea by boiling leaves for 10 minutes Add to food
Rosemary <i>Rosemarinus officinalis</i>	<ul style="list-style-type: none"> Stimulate appetite Aids digestion Antiseptic and antibiotic Anti-inflammatory effect Stimulates the digestive, respiratory, nervous and circulatory systems 	<ul style="list-style-type: none"> Use leaves to make tea Add fresh leaves to food or juice Steam inhalation for asthma

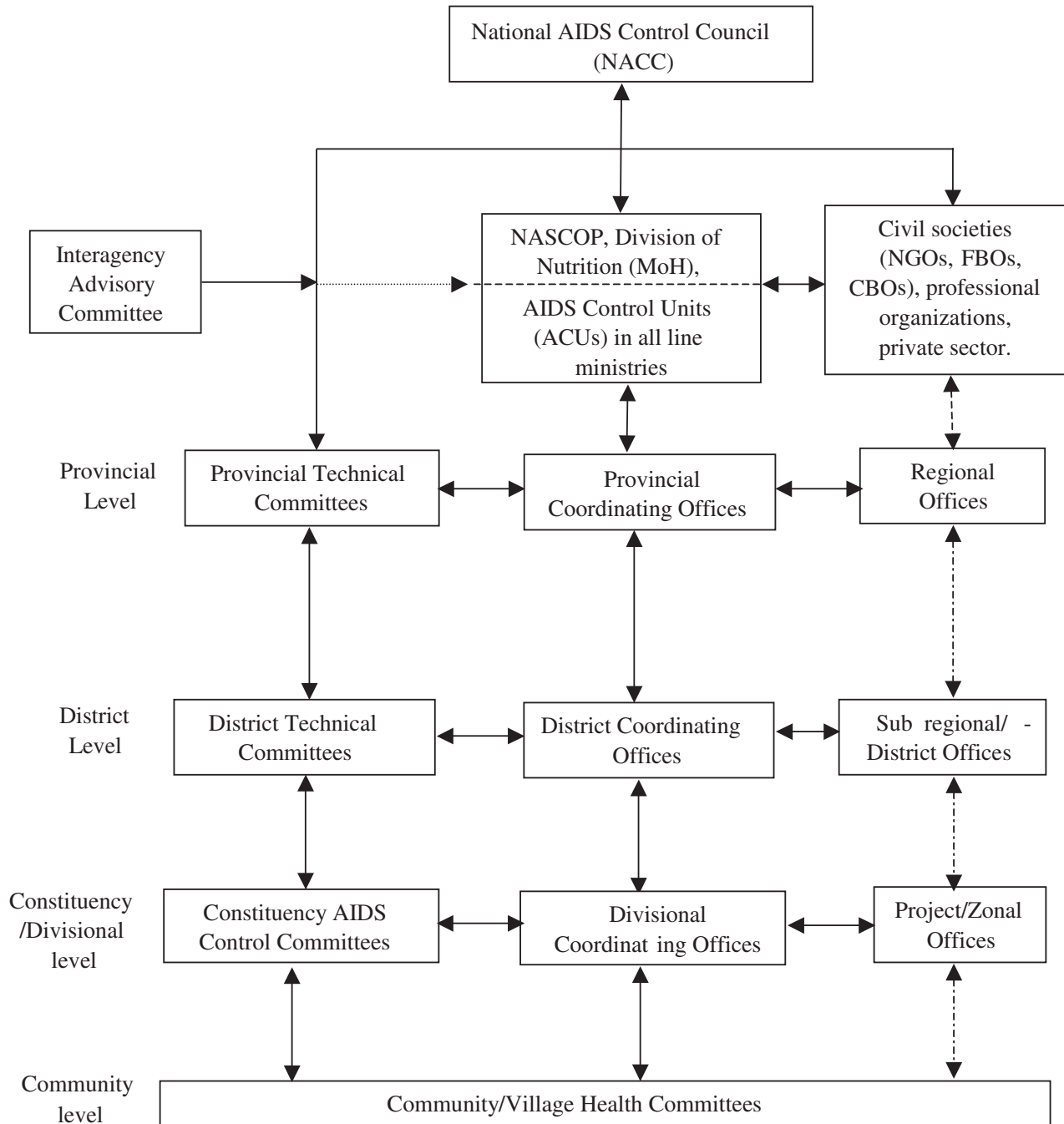
Name	Benefit	How to use
Basil	<ul style="list-style-type: none"> Relieves nausea Aids digestion Antiseptic for mouth sores 	<ul style="list-style-type: none"> 1 teaspoon to a cup of boiling water and drink 3 times a day. Add fresh or dry leaves to food. Gargle in warm water.
Calendula	<ul style="list-style-type: none"> Flower heads have antiseptic, anti-inflammatory and healing function Helps with infections of the upper digestive tract 	<ul style="list-style-type: none"> Prepare as tea. Use as a compress to treat wounds.
Cardamon	Pain, diarrhoea, nausea, vomiting, loss of appetite <ul style="list-style-type: none"> Helps with digestive problems 	<ul style="list-style-type: none"> Add to food during cooking. Prepare as food.
Cayenne <i>Capsicum</i>	<ul style="list-style-type: none"> Stimulates appetite Aids digestion Antiseptic 	<ul style="list-style-type: none"> Add a pinch to raw or cooked food. Add to fruit juice or water. <p>Avoid in cases of peptic ulcers, gastric hyperacidity. Wash hands after use.</p>
Chamomile <i>Chamomilla recutita</i>	<ul style="list-style-type: none"> Aids digestion Stimulates appetite Nausea Anti-inflammatory 	<ul style="list-style-type: none"> Prepare tea from the leaves and flowers and drink 3 times a day Inhale as steam
Eucalyptus <i>Eucalyptus globus</i>	<ul style="list-style-type: none"> Antibacterial effect on lungs Relieves respiratory congestion Bronchitis, asthma, fever Aids digestion Anti-inflammatory 	<ul style="list-style-type: none"> Prepare tea from the pounded leaves.
Fennel <i>Foeniculum vulgare</i>	<ul style="list-style-type: none"> Aids digestion Stimulates appetite Combats flatulence Anti-inflammatory Antiseptic 	<ul style="list-style-type: none"> Add as spice to food. Prepare tea from its seeds.
Lemon grass	<ul style="list-style-type: none"> Aids digestion Soothing and stress alleviation 	<ul style="list-style-type: none"> Use as a tea.
Parsley <i>Alchemilla arvenis</i>	<ul style="list-style-type: none"> Reduces intestinal cramps and indigestion Stimulates appetite Stimulates stomach secretions 	<ul style="list-style-type: none"> Add raw or cooked to food.
Sage <i>Salvia officinalis</i>	<ul style="list-style-type: none"> Stimulates appetite Aids digestion Anti-inflammatory effect Stimulates the digestive, respiratory, nervous and circulatory systems 	<ul style="list-style-type: none"> Use leaves to make tea. Add fresh leaves to food or warmed juice. Gargle tea made using 2 tablespoons to a cup of boiling water. Steam inhalation for asthma.
Thyme <i>Thymus vulgaris</i>	<ul style="list-style-type: none"> Antiseptic and antifungal function Stimulates digestion Stimulates growth of intestinal flora Increases mucous secretion in the gut 	<ul style="list-style-type: none"> Use leaves to make tea. Add fresh or dry leaves to food or warmed juice. Gargle tea made using 2 tablespoons to a cup of boiling water.
Turmeric/ yellow root	<ul style="list-style-type: none"> Aids digestion 	<ul style="list-style-type: none"> Use powder in cereals. Gives yellow colour to curry and rice.

Sources: Living well with HIV/AIDS. A manual on nutrition care and support for people living with HIV/AIDS. World Health Organization (WHO) and Food and Agricultural Organization (FAO), Rome 2002.

Personal communication. Centre for Traditional Medicine and Drugs Research, Kenya Medical Research Institute, Nairobi 2005.

Herbal remedies derived from the following plants are commonly used locally for therapeutic purposes: Aloe, *Ajuga remota* (Wanjiru rurii), neem (Mualobaini), *Warbugia ugadensis* (Muthiga), *Prunus Africana* (Muiri), *Zanthoxylum* spp (Muheheti, Mugushua, Mukenia).

Annex 10.1: Framework for the National Nutrition Intervention in the Fight against HIV/AIDS



Annex 10.2: Indicators for Monitoring and Evaluation

Component	Objective	Indicators	Assessment method
Dissemination	To assess the effectiveness of the dissemination strategies	<ul style="list-style-type: none"> • Number of service providers with copies of the Guidelines • Number of service providers who are aware of the existence of the Guidelines • Number of strategies used to disseminate the Guidelines and recommendations • Availability and accessibility of Guidelines and other nutrition-promoting materials (such as posters and pamphlets) at various institutions and organizations. • Number of translations of the Guidelines into local languages. 	Review of records and community based sample survey
Implementation	To incorporate and put in practice the guideline recommendations in the on-going programmes and services	<ul style="list-style-type: none"> • Number of health programmes implementing nutritional care services for PLWHA in both public and private sectors (Annex 10.1). • Number of training institutions with nutritional care and support services incorporated in their training programmes • Number of training sessions/ workshops organized for service providers at different levels • Number of service providers (counselors, health educators, extension workers, teachers, social workers) trained in the use of the Guidelines. • Number of initiatives such as home based care and workplace education initiatives in both public and private sectors that include nutritional care and support activities. • Number of PLWHA receiving nutritional care services. Amounts of funds allocated to nutritional care and support of PLWHA. 	Review of records and community based sample surveys

Behaviour change among service providers, PLWHA and families	To assess the acceptance of the Guidelines by the service providers and clients.	<ul style="list-style-type: none"> • Proportion of service providers expressing willingness to adopt or continue implementing the guideline recommendations • Number of PLWHA reporting changes in dietary behaviour based on adequacy of energy, protein and micronutrient intake. 	Sample survey and observation
		<ul style="list-style-type: none"> • Number of PLWHA reporting modification of lifestyles such as avoidance of alcohol and cigarettes. • Number of PLWHA who report behaviour change in frequency of eating, type of food, dietary diversity and practice of recommended dietary response to symptoms such as nausea. • Number of families growing nutritious foods. 	
Health outcome of PLWHA	To monitor the health effects of nutritional care and support Guidelines	<ul style="list-style-type: none"> • Number of PLWHA with improved or stabilized weight and body mass index. • Number of PLWHA who report ability to perform basic work activities. • Number of PLWHA reporting reduction in frequency and severity of symptoms of opportunistic infections. 	Longitudinal sample survey and observation

Bibliography

1. *Nutrient requirement for people living with HIV/AIDS*. Report of a technical consultation. World Health Organization, Geneva, May 2003.
2. Kenya Demographic and Health Survey. Ministry of Health. Government of Kenya, 2003.
3. *Reference Manual for Nutrition and HIV/AIDS in Kenya, 2005 (Draft)*.
4. Food and Agriculture Organization of the United Nations/World Food Organization of the United Nations (FAO/WHO) expert committee. *Energy and protein requirements*. World Health Organization Technical report series 724, Geneva 1985.
5. *HIV/AIDS: A guide for nutrition, care and support*, 2nd edition. Food and Nutrition Technical Assistance Project. Academy for Educational Development Washington DC, 2004.
6. Food and Agriculture Organization of the United Nations/World Food Organization of the United Nations (FAO/WHO) expert consultation on *Human vitamin and mineral requirements, Bangkok, Thailand 1998*.
7. World Health Organization Consultation on Nutrition and HIV/AIDS in Africa, Durban South Africa, 2005.
8. Thilsted SH. *Strengthening food and nutrition activities within the community Initiative Activity/Funds (CIA/CIF) under the Multi-country HIV/AIDS Programme for Africa (MAP) in Kenya*. The World Bank, Nairobi 2003.
9. Nutrition counseling, care and support for HIV-infected women. *Guidelines on HIV-related care treatment and support for HIV-infected women and their children in resource-constrained settings*. World Health Organization, Geneva, 2004.
10. *Global strategy for infant and young child feeding*. World Health Organization, Geneva 2003.
11. *HIV transmission through breastfeeding*. A review of available evidence. WHO/UNICEF/UNAIDS/UNFPA, 2004.
12. World Health Organization technical consultation, UNFPA/UNICEF/WHO/UNAIDS Inter-Agency Task Team on Mother-To-Child Transmission of HIV, Geneva, 2001. WHO/RHR/01.28.
13. Castleman T. Seumo-Fosso E and Cogil B. *Food and nutrition implications of viral therapy in resource settings*. Food and Nutrition Technical Assistance, Technical Note No. 7, 2003.
14. Poverty in Kenya. Volume II. *Poverty and socio indicators*. Ministry of Planning and National Development. Government Printers, 1998.

Kenyan National Guidelines on Nutrition and HIV/AIDS



Republic of Kenya
Ministry of Health

FOOD AND
NUTRITION
TECHNICAL
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