



Nutrition Assessment, Counselling, and Support (NACS) for PLHIV and/or TB

JOB AIDS

September 2013

1. Energy and nutrition requirements for PLHIV
2. How to measure mid-upper arm circumference (MUAC)
3. Body Mass Index (BMI) chart assessment
4. How to assess for bilateral pitting oedema
5. How to conduct RUTF appetite test
6. Critical nutrition actions for PLHIV and TB clients
7. Dietary management of HIV and TB related illness
8. RUTF reference tables
9. RUTF key messages
10. NACS specialized food products protocol



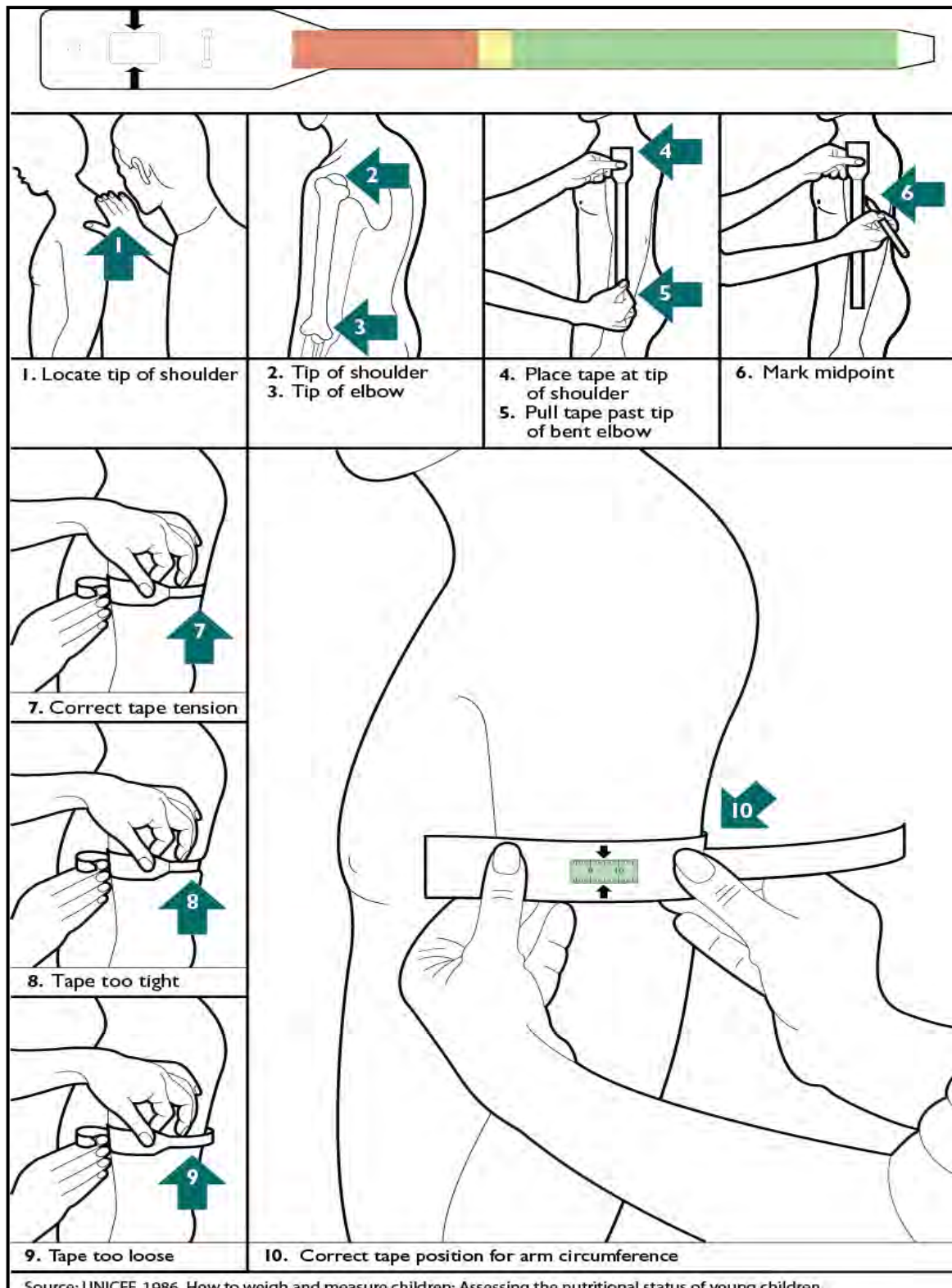
This set of job aids was made possible by the generous support of the American people through the support of the Office of Health, Infectious Diseases, and Nutrition, Bureau for Global Health, U.S. Agency for International Development (USAID), and USAID/Ghana, under terms of Cooperative Agreement No. AID-OAA-A-12-00005, through the Food and Nutrition Technical Assistance III Project (FANTA), managed by FHI 360. The contents are the responsibility of FHI 360 and do not necessarily reflect the views of USAID or the United States Government.

1. Energy and Nutrient Requirements for PLHIV and/or TB

Age group	Healthy	HIV and/or TB-infected		
		Asymptomatic	Symptomatic	Severely acutely malnourished
Children				
		10% more energy	20% more energy	50%–100% more energy
6–11 months old	680	760	830	150–200 kcal/kg of body weight/day
12–23 months old	900	990	1,080	150–200 kcal/kg of body weight/day
2–5 years old	1,260	1,390	1,510	150–200 kcal/kg of body weight/day
6–9 years old	1,650	1,815	1,980	75–100 kcal/kg of body weight/day
10–14 years old	2,020	2,220	2,420	60–90 kcal/kg of body weight/day
Adults				
Non-pregnant/lactating	2,000–2,580	10% more energy (210–258 more kcal)	20% more energy (420 more kcal)	
Pregnant/lactating women	2,460–2,570 ¹			

¹ The requirements for adults also apply to pregnant and lactating women, in addition to the usual extra requirements for pregnancy and lactation.

2. How to Measure Mid-Upper Arm Circumference (MUAC)



3. Body Mass Index (BMI) Chart

$$\text{Body mass index (BMI)} = \frac{\text{Weight (kg)}}{\text{Height (m)}^2}$$

1. Find the client's height in the left-hand column, or (1 metre = 100 cm)
2. Find the client's weight in the corresponding height row.
3. Read off the corresponding BMI value.



Red shows severe acute malnutrition (BMI < 16.0).



Yellow shows moderate acute malnutrition (BMI 16.0–18.4).



Green shows normal weight-for-height (BMI 18.5–24.9).



Orange shows overweight (BMI 25.0–29.9).



Purple shows obesity (BMI > 30).

4. How to Assess for Bilateral Pitting Oedema

Bilateral pitting oedema is swelling on both feet and legs. This is a clinical sign of acute malnutrition. It is caused by abnormal infiltration and excess accumulation of serous fluid in connective tissue or in a serous cavity.

To check for oedema, grasp feet so that it rests in your hand with your thumb on top. Press your thumb gently for about 3 seconds (at the same time, count 101, 102, 103). There is bilateral pitting oedema if a pit (dent) remains in both feet when you lift your thumb. To be considered as SAM oedema must appear on both feet.

Bilateral Pitting Oedema

There are three grades of bilateral pitting oedema, shown below.



Grade + (mild)

There is bilateral pitting oedema in both feet. This is grade + oedema. But the child might have grade ++ or +++, so legs and face also will need to be checked.



Grade ++ (moderate)

Both feet plus the lower legs, hands, and lower arms are swollen. This is grade ++ bilateral pitting oedema.



Grade +++ (severe)

This child has +++ bilateral pitting oedema. It is generalised, including both feet, legs, arms, hands, and face.

A second person should repeat the test to confirm the presence of bilateral pitting oedema.

If the pitting is not bilateral (in both feet), the oedema is not caused by malnutrition.

5. How to Conduct RUTF Appetite Test

All adults and children with HIV/TB that are classified as having SAM should go through a Ready-to-Use Therapeutic Food (RUTF) appetite test to determine the next step for treatment. If an adult or child with SAM has no appetite and is not able to eat sufficient quantities of the RUTF, he or she should be referred for treatment in inpatient care.

Points to Consider when Conducting an Appetite Test

- Conduct the appetite test in a quiet, separate area.
- Provide an explanation to the caregiver regarding the purpose of the appetite test and outline the procedures involved.
- Observe the child/adult eating the RUTF and determine if he/she passes or fails the appetite test within 30 minutes.
- Wash hands before giving/eating the RUTF.
- Offer plenty of clean water to drink from a cup while eating the RUTF.
- For children, counsel caregivers to:
 - Sit with the child in his/her lap and gently offer the RUTF
 - Encourage the child to eat the RUTF without force feeding

Minimum amount of RUTF that a child must eat to pass the appetite test	
Weight (kg)	Quantity (packet of 92 g) of RUTF
≤ 12.0	$\frac{1}{3}$
12.0–14.9	$\frac{1}{2}$
15.0–29.0	$\frac{3}{4}$
≥ 29.0	1

Adult clients should finish at least one packet of RUTF to pass the appetite test.

6. Critical Nutrition Actions for PLHIV and TB Clients

Critical Nutrition Actions for PLHIV	Key message	Explanation
1. Get weighed regularly by a health care provider.	<ul style="list-style-type: none"> If you have HIV-related symptoms, get weighed every month. 	<ul style="list-style-type: none"> Periodic weighing helps you track any weight change and take action early.
	<ul style="list-style-type: none"> If you are not showing symptoms associated with HIV, get weighed at least every 3 months. 	
	<ul style="list-style-type: none"> Keep the record of your weight in a folder or on your weight chart. 	
	<ul style="list-style-type: none"> Seek clinical care if you unintentionally lose more than 6 kg of weight in 2–3 months. 	<ul style="list-style-type: none"> Unintentional loss of more than 6 kg in 2–3 months indicates poor health or eating habits to maintain your weight or that HIV is fast progressing to AIDS.
	<ul style="list-style-type: none"> If you are overweight, reduce your intake of fatty and sugary foods and increase physical exercise. 	<ul style="list-style-type: none"> Unintentional weight loss or gain may imply poor health and lead to hospitalisation.
2. Increase energy intake by eating a variety of foods, especially energy-rich foods, more often, especially if you are sick.	<ul style="list-style-type: none"> Eat locally available and affordable foods from each food group to vary your diet and increase energy intake. 	<ul style="list-style-type: none"> PLHIV need more energy every day than uninfected people of the same age, gender, and physical activity. Eating a varied diet is the best way to ensure that your body gets all the nutrients required. Fruits and vegetables strengthen immunity.
	<ul style="list-style-type: none"> Eat five times a day (three meals and two snacks). Eat at least 1 cup of food at each meal. 	<ul style="list-style-type: none"> The extra energy needed is based on the stage of HIV. Increasing energy intake helps you get the energy and other nutrients (proteins and micronutrients) that your body needs.
	<ul style="list-style-type: none"> Improve the digestibility of some foods by cooking, mashing, or fermenting them (this requires demonstration). 	<ul style="list-style-type: none"> HIV infection affects digestion and absorption.
3. Drink plenty of clean and safe (boiled or treated) water.	<ul style="list-style-type: none"> Drink about eight glasses of water a day. Boil or treat drinking water. Have enough clean safe drinking water in the home at all times for drinking, making juice, and taking medicine. 	<ul style="list-style-type: none"> The body needs water to remove toxins, including those caused by HIV or antiretroviral drugs. Drink only clean, treated water to prevent infections such as diarrhoea.
4. Maintain a healthy lifestyle by avoiding unprotected sex, alcohol, recreational drugs, tobacco, and sodas and other coloured and sweetened drinks.	<ul style="list-style-type: none"> Practice safer sex, using condoms. 	<ul style="list-style-type: none"> Safer sex avoids infection and transmission of HIV and other sexually transmitted infections.
	<ul style="list-style-type: none"> Avoid alcohol, including local beer/brew, especially if you are taking medicines. 	<ul style="list-style-type: none"> Alcohol interferes with digestion, absorption, storage, and utilisation of nutrients.
	<ul style="list-style-type: none"> Avoid smoking cigarettes and taking drugs without prescription. 	<ul style="list-style-type: none"> Smoking interferes with appetite and increases your risk of cancer and respiratory infections, particularly TB.
	<ul style="list-style-type: none"> Limit your intake of junk food, such as chips, sodas, and sugary foods like cakes and candies. 	<ul style="list-style-type: none"> Most sweetened, coloured drinks sold in shops contain water, sugar, food colour, and artificial flavour. They are not fruit juice. Junk foods have little nutritional value and can even harm your health.

Critical Nutrition Actions for PLHIV	Key message	Explanation
	<ul style="list-style-type: none"> Seek help at the nearest health facility to manage depression and stress. 	<ul style="list-style-type: none"> Stress and depression may interfere with your appetite and therefore reduce food intake.
	<ul style="list-style-type: none"> Get enough rest. 	<ul style="list-style-type: none"> Too little sleep may make you more fatigued and give you a feeling of ill health that affects appetite and strength.
5. Maintain high levels of hygiene and sanitation.	<ul style="list-style-type: none"> Wash your hands under flowing water with soap after using the toilet and before handling and preparing food to avoid infection. 	<ul style="list-style-type: none"> PLHIV can easily get infections. These make you feel weak, vomit, have diarrhoea, and lose your appetite.
	<ul style="list-style-type: none"> Be careful when buying ready-to-eat foods because they may be contaminated by preparation or handling in unhygienic environments. 	<ul style="list-style-type: none"> Diarrhoea affects digestion and absorption of food and removes fluids and other essential nutrients from your body.
6. Engage in physical activity (exercise) as often as possible.	<ul style="list-style-type: none"> Exercise regularly, at least 30 minutes each day, by doing household chores, walking, jogging, or running. 	<ul style="list-style-type: none"> Regular exercise is necessary to strengthen and build muscle, improve appetite, manage stress, and improve overall health and alertness.
7. Prevent infections and seek early treatment of infections and advice on managing symptoms through diet.	<ul style="list-style-type: none"> Seek immediate clinical help for management of illness. 	<ul style="list-style-type: none"> Illness affects the body's intake, digestion, absorption, and utilisation of food. Late treatment of illnesses affects your nutritional status.
	<ul style="list-style-type: none"> Always seek advice from a health care provider on any traditional remedies or nutrition supplements you are taking. 	<ul style="list-style-type: none"> Nutrition supplements should not replace food. Some nutrition supplements may falsely claim that they treat HIV. Some traditional herbs may affect the way other drugs act in the body and can make the drugs ineffective or produce side effects.
	<ul style="list-style-type: none"> Manage symptoms with dietary practices at home where possible. 	<ul style="list-style-type: none"> Dietary management can help manage certain symptoms, reduce their severity, and enable you to continue eating and recover from symptoms faster.
8. Manage food and drug interactions and side effects through diet.	<ul style="list-style-type: none"> Take all medicines as advised by the health worker. 	<ul style="list-style-type: none"> Not adhering to prescribed drug regimens may make HIV resistant to the drugs, making them less effective and possibly requiring you to change to stronger drugs.
	<ul style="list-style-type: none"> Work with a health care provider or counsellor to make and maintain a drug-food schedule to help you plan times to take your medicines in relation to meals. Ask someone to help you keep the schedule. 	<ul style="list-style-type: none"> ART needs to be taken lifelong and as such it is important to establish a time that is not only convenient to you but also maximises the effectiveness of the medication.
	<ul style="list-style-type: none"> Ask about the side effects that are likely to result from drugs. Ask how you can manage drug side effects at home. 	<ul style="list-style-type: none"> Many side effects can be managed through changing your diet or lifestyle.

Source: Adapted from FANTA 2001; Pronsky et al. 2001; Nerad 2003; Castleman et al. 2004; and WHO 2003.

7. Dietary Management of HIV and TB Related Illness

Illness	Diet	Care and nutrition practices
Anorexia (appetite loss)	<ul style="list-style-type: none"> Stimulate appetite by eating favourite foods. Eat small amounts of food more often. Eat more energy-dense foods. Choose foods with pleasant aromas and that the client likes. Eat meals and snacks in pleasant settings. 	<ul style="list-style-type: none"> If appetite loss is a result of illness, seek medical treatment.
Mild diarrhoea	<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 citrus fruits (orange, lemon) because they irritate the stomach. Eat foods rich in soluble fibre (millet, banana, peas, and lentils) to help retain fluids. Eat fermented foods such as porridges and yogurt. Eat easily digestible foods such as rice, bread, millet, cereal porridge, potato, sweet potato, and crackers. Eat small amounts of food frequently. Continue to eat frequently after illness to recover weight and nutrient loss. Drink non-fat milk if there is no problem with lactose. 	<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 food. 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 sachets or a homemade solution from cereals. Go to a health facility 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 2 days.
Severe diarrhoea	<ul style="list-style-type: none"> Drink a lot of fluids (soups, diluted fruit juices, boiled water, and light herbal teas) to avoid dehydration. Eat fermented foods such as porridges and yogurt. Eat easily digestible foods such as rice, bread, millet, cereal porridge, potato, sweet potato, and crackers. Eat small amounts of food frequently. Continue to eat frequently after illness to recover weight and nutrient loss. Eat soft fruits and vegetables such as bananas, mashed sweet potato, and mashed carrots. Drink non-fat milk if there is no problem with lactose. Boil or steam foods if diarrhoea is associated with fat malabsorption. Avoid or reduce intake of dairy products (milk); caffeine (coffee and teas) and alcohol; fatty foods; fried foods and extra oil, lard, or butter; and gas-forming foods such as cabbage, onions, and 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 food. 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 sachets or a homemade solution from cereals. Go to a health facility 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 2 days.
Fever	<ul style="list-style-type: none"> Eat soups rich in foods that give energy and nutrients, such as cereal, 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 Paracetamol tablets, if available, with a meal three times a day (morning, afternoon, and evening). Go to the health facility if you have fever that lasts 2 days and is not relieved with Paracetamol or brief loss of consciousness, severe body pain, yellow eyes, severe diarrhoea, or convulsions and seizures.

Illness	Diet	Care and nutrition practices
Nausea and vomiting	<ul style="list-style-type: none"> • Eat small frequent meals. • Eat soups, unsweetened porridge, and fruits such as bananas. • Eat slightly 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. • Avoid strong-smelling foods • 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.
Thrush	<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 that may irritate mouth sores. • Avoid sugary foods that 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 treatment. • Use a spoon or cup to eat small amounts of foods. • Tilt your head back when eating to help with swallowing. • Rinse your mouth with boiled warm, salty water after eating to reduce irritation and keep yeast from growing.
Constipation	<ul style="list-style-type: none"> • Eat more high-fibre foods 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"> • Avoid cleansing practices such as enemas and medications. • Drink plenty of fluids, including clean, boiled water.
Anaemia	<ul style="list-style-type: none"> • Eat more iron-rich foods such as animal products (eggs, fish, meat, liver), green leafy vegetables (<i>kontomire</i>, spinach), legumes (beans, groundnuts), nuts, oil seeds, and fortified cereals. • Take iron supplements (if not SAM). • Avoid drinking tea or coffee within 2 hours before or after meals. 	<ul style="list-style-type: none"> • If available, take one iron tablet once a day with some food. • Take your meals with a source of vitamin C, such as fresh tomatoes, oranges, or guavas, to help with absorption of iron from plant-based foods. • Treat malaria and hookworm if you have symptoms.
Muscle wasting	<ul style="list-style-type: none"> • Eat more and eat more often. • Improve the quality and quantity of foods by eating a variety of foods. • Eat more foods high in protein. • Eat more starchy foods (cereals and other staples). • Eat small frequent meals. 	<ul style="list-style-type: none"> • Perform light exercises (such as walking, climbing stairs), since exercises help build muscles.
Bloating or heartburn	<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 that food can digest.
TB	<ul style="list-style-type: none"> • Eat 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.
Loss of taste or abnormal taste	<ul style="list-style-type: none"> • Use flavour enhancers such as salt, herbs, spices, and lemon. • Eat dry foods such as crackers. 	<ul style="list-style-type: none"> • Eat small frequent meals. • Chew food well and move it around the mouth to stimulate receptors.

8. RUTF Reference Tables

Reference table for amounts of RUTF to give to a child per day or week based on 92 g packets containing 500 kcal

Weight of Child (kg)	Packets per Week	Packets per Day
3.5–3.9	11	1.5
4.0–4.9	14	2
5.0–6.9	18	2.5
7.0–8.4	21	3
8.5–9.4	25	3.5
9.5–10.4	28	4
10.5–11.9	32	4.5
≥ 12	35	5

NOTE: For adults with SAM, provide 3 sachets of RUTF and 300 g of Fortified Blended Food (FBF).

9. RUTF Key Messages

Key messages at each visit

- RUTF is a food and medicine for very thin children only. It should not be shared.
- Sick children and adults often do not like to eat. Give small regular meals of RUTF and encourage the child to eat often (if possible eight meals a day). You or your child should have ___ packets a day.
- RUTF is the only food sick/thin children need to recover during their time in outpatient care (however, breastfeeding should continue).
- For young children, continue to breastfeed regularly.
- Always offer/drink plenty of clean water to drink or if a child who is breastfeeding breast milk while he or she is eating RUTF.
- Wash hands and face (if child) with soap before eating the RUTF.
- Keep food clean and covered.
- Sick children and adults get cold quickly. Always keep the child covered and warm.
- In-case of diarrhoea, never stop feeding. Continue to feed RUTF and (if applicable) breast milk.

10. NACS Specialized Foods Products Protocol

All children under 6 months of age or less than 4.0 kg with Severe Acute Malnutrition (SAM)

ENTRY CRITERIA	FOOD REGIMEN	TRANSITION/EXIT CRITERIA
Bilateral pitting oedema OR Visible wasting	Refer for inpatient care management and treat according to <i>Interim National Guidelines for Community-Based Management of SAM (CMAM) in Ghana</i> .	

All children 6 months – 17 years of age with SAM

6–24 month HIV-exposed and under 24 months HIV+;

Refer children under 5 with SAM who are HIV- and unexposed to CMAM

SAM WITH MEDICAL COMPLICATIONS

If any of the following medical complications are present: anorexia/no appetite, intractable vomiting, convulsions, lethargy/not alert, unconsciousness, hypoglycaemia, high temperature, hypothermia, severe dehydration, lower respiratory tract infection, severe anaemia, skin lesions, eye signs of vitamin A deficiency

And **ANY ONE** of the following:

- Bilateral pitting oedema grade + or ++ **WITH** MUAC
6–59 months: < 11.5 cm
6–9 years: < 13.5 cm
10–14 years: < 16.0 cm
15–17 years: < 17.5 cm
- Bilateral pitting oedema +++
- Marasmus/kwashiorkor

Care plan for SAM in Inpatient Care:

The following steps are essential for successful management of a child with SAM with medical complications. Details on the management are covered in the *Training Course on Inpatient Care Management of SAM*.

- 1–2. Treat/prevent hypothermia and hypoglycaemia (which are often related) by feeding, keeping warm and treating infection.
3. Treat/prevent dehydration using rehydration solution for malnutrition (ReSoMal).
4. Correct electrolyte imbalance (by giving feeds and ReSoMal prepared with combined mineral and vitamin mix [CMV]).
5. Presume and treat infection with antibiotics.
6. Correct micronutrient deficiencies (by giving feeds prepared with CMV; if CMV is not available, by giving mineral mix, and by giving extra vitamins and folic acid as needed).
7. Start cautious feeding with F-75 to stabilise the child (usually 2–7 days).
8. Rebuild wasted tissues through higher protein and calorie feeds (RUTF or F-100).
9. Provide stimulation, play, and loving care.
10. Prepare mothers for referral and follow up in outpatient care to continue treatment (or proper feeding and stimulation after discharge if full recovery is attained in inpatient care).

Refer to outpatient care for the management of SAM if:

[All of the following must be checked]

- All medical complications are stabilised.
- No bilateral pitting oedema grade +++
- No marasmic-kwashiorkor
- Passes appetite test (can the eat amount of RUTF depending on weight)
- Parent willing to provide home management and willing and able to attend outpatient care for follow-up every 1 week
- Enough supplies of RUTF can be provided for the child to last until the next visit (otherwise keep the child in inpatient care until the has recovered from SAM.i)

[If all of the above have been met, THEN

Schedule an appointment for follow-up after 1 week and refer child to the nearest health facility providing outpatient care services

OTHERWISE

Continue inpatient care treatment until the MUAC is for two consecutive visits:
6–59 months: > 12.5 cm
6–9 years: >14.5 cm
10–14 years: > 18.5 cm
15–17 years: >19.5 cm

SAM WITHOUT MEDICAL COMPLICATIONS:

<p><input type="checkbox"/> MUAC 6–59 months: < 11.5 cm 6–9 years: < 13.5 cm 10–14 years: < 16.0 cm 15–17 years: < 17.5 cm</p> <p>AND</p> <p>Has appetite and passes the appetite test (can eat the amount of RUTF specified for weight)</p> <p>OR</p> <p><input type="checkbox"/> Bilateral pitting oedema grade + or ++</p> <p>WITH</p> <p>Caregiver able and willing to provide home management of SAM and able and willing to attend outpatient care clinic every 1–2 weeks</p>	<p>Care plan for SAM in Outpatient Care: Children with SAM without medical complications can be treated in outpatient care under the CMAM program.</p> <p>Provide medications as per the Interim National Guidelines for CMAM in Ghana and educate caregiver on how to provide the medications at home.</p> <p>Give enough RUTF to provide energy needs. The amount given depends on weight.</p> <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 10px;"> <thead> <tr> <th style="text-align: center;">Weight of Child (kg)</th> <th style="text-align: center;">Packets per Day</th> <th style="text-align: center;">Packets per Week</th> </tr> </thead> <tbody> <tr><td style="text-align: center;">4.0–4.9</td><td style="text-align: center;">2.0</td><td style="text-align: center;">14.0</td></tr> <tr><td style="text-align: center;">5.0–6.9</td><td style="text-align: center;">2.5</td><td style="text-align: center;">18.0</td></tr> <tr><td style="text-align: center;">7.0–8.4</td><td style="text-align: center;">3.0</td><td style="text-align: center;">21.0</td></tr> <tr><td style="text-align: center;">8.5–9.4</td><td style="text-align: center;">3.5</td><td style="text-align: center;">25.0</td></tr> <tr><td style="text-align: center;">9.5–10.4</td><td style="text-align: center;">4.0</td><td style="text-align: center;">28.0</td></tr> <tr><td style="text-align: center;">10.5–11.0</td><td style="text-align: center;">4.5</td><td style="text-align: center;">32.0</td></tr> <tr><td style="text-align: center;">≥ 12</td><td style="text-align: center;">5</td><td style="text-align: center;">35.0</td></tr> </tbody> </table>	Weight of Child (kg)	Packets per Day	Packets per Week	4.0–4.9	2.0	14.0	5.0–6.9	2.5	18.0	7.0–8.4	3.0	21.0	8.5–9.4	3.5	25.0	9.5–10.4	4.0	28.0	10.5–11.0	4.5	32.0	≥ 12	5	35.0	<p>Exit if the child, while in treatment for SAM:</p> <p><input type="checkbox"/> Attained the MUAC as stated below for two consecutive visits: 6–59 months: > 12.5 cm 6–9 years: >14.5 cm 10–14 years: > 18.5 cm 15–17 years: >19.5 cm</p> <p>AND</p> <p><input type="checkbox"/> No bilateral pitting oedema for 2 consecutive visits</p> <p>OTHERWISE</p> <p>Refer child to inpatient care if his or her condition worsens, according to the CMAM Action Protocol.</p>
Weight of Child (kg)	Packets per Day	Packets per Week																								
4.0–4.9	2.0	14.0																								
5.0–6.9	2.5	18.0																								
7.0–8.4	3.0	21.0																								
8.5–9.4	3.5	25.0																								
9.5–10.4	4.0	28.0																								
10.5–11.0	4.5	32.0																								
≥ 12	5	35.0																								

HIV+ children and those born to HIV+ parents ages 6 months – 17 years of age with Moderate Acute Malnutrition (MAM)

MAM:		
ENTRY CRITERIA	FOOD REGIMEN	TRANSITION/EXIT CRITERIA
<p>No bilateral oedema</p> <p>OR</p> <p>MUAC 6–59 months: 11.5 – < 12.5 cm 6–9 years: 13.5 – < 14.5 cm 10–14 years: 16.0 – < 17.0 cm 15–17 years: 17.5 – < 19.5 cm</p>	<p>Care plan for MAM: Fortified-blended food (FBF): 6–59 months: 150 g/day 5–9 years: 150 g/day 10–14 years: 300 g/day 15–17 years: 300 g/day</p>	<p>Provide food for 2 months and review the case</p> <p>Exit only if has attained the MUAC as stated below for two consecutive visits: 6–59 months: > 12.5 cm 6–9 years: >14.5 cm 10–14 years: > 18.5 cm 15–17 years: >19.5 cm</p>

HIV+ clients (ART and pre-ART clients, TB clients, non-pregnant/post-partum adults) and women enrolled in PMTCT services

SAM WITH MEDICAL COMPLICATIONS:

<p>If any of the following medical complications are present: bilateral pitting oedema grade +++, anorexia/no appetite, severe anaemia, high temperature, weakness, lethargy/not alert, unconsciousness, convulsions, hypothermia, persistent diarrhoea, intractable vomiting, rapid breathing, active TB, heart failure, kidney failure</p> <p>AND</p> <p>BMI < 16.0 kg/m²</p> <p>OR</p> <p>Inability to stand straight to take height measurement and MUAC < 19.0 cm</p> <p>OR</p> <p>Pregnant/lactating women (up to 6 months postpartum) use MUAC < 21.0 cm</p> <p>OR</p> <p>MUAC < 23.0 cm with weight loss</p>	<p>Care plan for SAM in Inpatient Care: Adults with SAM with SAM and medical complications are treated using the same protocol as that of children.</p> <p>Gradually introduce 3 sachets of RUTF and 300 g of FBF (and hospital foods) per day.</p> <p>Upon discharge from hospital, conduct an appetite test with RUTF. Provide 3 sachets of RUTF and 300 g of FBF per day.</p>	<p>Refer to outpatient care if:</p> <ul style="list-style-type: none"> <input type="checkbox"/> All illnesses under treatment are stabilised <p>AND</p> <ul style="list-style-type: none"> <input type="checkbox"/> No bilateral pitting oedema grade +++ is present for 3 consecutive days <p>AND</p> <ul style="list-style-type: none"> <input type="checkbox"/> Has appetite <p>AND</p> <ul style="list-style-type: none"> <input type="checkbox"/> Ability exists for home management and client can come to the outpatient care site for food supplements and review the case after 14 days
---	---	--

SAM WITHOUT MEDICAL COMPLICATIONS:

<p>Bilateral pitting oedema grade + or ++</p> <p>OR</p> <p>BMI 16.0 kg/m²</p> <p>OR</p> <p>If unable to stand straight for height measurement, use MUAC < 19.0 cm</p>	<p>Care plan for SAM in Outpatient Care: Provide medicines per the Interim National CMAM Guidelines. Conduct the appetite test with RUTF and FBF. Provide 3 sachets of RUTF and 300g of FBF per day.</p>	<p>Attained BMI >18.5 kg/m²</p>
<p>Pregnant/lactating women (up to 6 months postpartum), use MUAC < 21.0 cm</p> <p>OR</p> <p>MUAC < 23.0 cm with weight loss</p>		<p>Weight MUAC >23.0 cm</p> <p>For pregnant women, transition only after the duration of pregnancy and 6 months postpartum (i.e., when the infant is 6 months of age). Review when the infant is 6 months of and discharge unless the mother has SAM or MAM.</p>

MAM:

<p>BMI 16.0 - < 18.5 kg/ m²</p> <p>OR</p> <p>MUAC 19.0 cm - < 21.0 cm for adults who cannot stand</p> <p>OR</p> <p>MUAC 21.0 cm - < 23.0 cm if pregnant</p>	<p>Care plan for MAM: Provide 300 g of FBF per day (or 9 kg of FBF for 1 month or until next ART clinic visit).</p>	<p>Attained BMI >18.5 kg/m²</p> <p>Weight MUAC >23.0 cm</p> <p>For Pregnant women: Provide treatment for the duration of pregnancy and the first 6 months postpartum (i.e., until the infant is 6 months of age). Review when the infant is 6 months of age and discharge, unless the mother has MAM.</p>
---	--	--