

FAQs: What bulk food items are appropriate to send to patients with HIV/AIDS in Africa?

1. Do nutrient needs increase in patients with HIV/AIDS?

In general, yes. We know that infection of any kind, HIV included, causes an increase in metabolic rate, which increases calorie needs. In cases of fever or previous malnutrition, protein needs are increased. In many to most cases of chronic HIV infection that remains untreated you may find immunodeficiency and opportunistic infection (including reappearance of infections that can be attributed to previous exposure), which can lead to increases in protein requirements. Infections that cause losses of nutrients because of diarrhea, vomiting, and fever are more common in untreated HIV infection. And, even though treatment can bring viral load down to undetectable levels, research has documented a continual body response to infection. The gastrointestinal tract, probably because it is such a dynamic organ, is especially hard hit and malabsorption of macro and micronutrients has been widely documented.

2. What are the key nutrients to focus on?

The hierarchy of nutrient needs is as follows:

1. Fluids: safe supply
2. Calories: adequate for both health and active infection
3. Protein: high quality and adequate for both health and infection
4. Micronutrients: a big question mark remains here because there are changes in absorption, storage and assimilation, functions, and losses of micronutrients; it is uncertain about what is needed in higher quantities and what may be less tolerated by individuals with chronic inflammatory diseases (such as HIV and TB)

This hierarchy is especially important in therapeutic feedings for HIV-infected people because the ones lower on the list don't work well if the ones above are not taken care of adequately.

3. Are there any foods that should be avoided?

Aside from obviously unsafe foods, foods to be avoided are individually determined. There is less danger in a wider variety of foods that can dilute the effects of foods that may cause an individual a problem, such as additional diarrhea. More specifically, foods that should be avoided are usually those that are not tolerated by individuals or groups. For instance, if lactose intolerance and diarrhea are already problems that have been identified in a target population or region, milk products may not be well tolerated and may even be counterproductive. The bottom line for foods to add and foods to avoid is that a needs assessment will help to hit the mark rather than to miss and fail.

4. Are there any foods that interact with HIV/AIDS meds?

Yes, most do. There are regimens that have diet instructions that are required to make sure that the drugs are well absorbed and utilized. There are also adverse or other actions of the medications that make food choices more important (particularly because the object of treatment is usually survival and improved life-time productivity). The ADA-published booklet on Living Well with HIV/AIDS has quite a bit of info on medication interactions.

5. What food safety issues should be considered?

The same ones that are considered in all commodity distributions, such as storage conditions and duration. In addition, food handling and preparation instructions/education for the beneficiaries is an important aspect of food safety. In the case of untreated HIV infection (which is pretty much most of the world), extra care should be taken with the fluids used to reconstitute and otherwise prepare foodstuffs. It would also be very helpful to have instructions on what things are more likely to be tolerated in cases of diarrhea, nausea, and other symptoms that compromise nutritional status.

6. What considerations should be made for pregnant and lactating women and children with HIV/AIDS?

For food choices and distribution, there is a greater need for calories and protein in pregnant and lactating women with HIV infection... especially with existing malnutrition, symptomatic infection that is complicated by opportunistic infections, and constitutional symptoms (diarrhea, fever, nausea/vomiting). Women with HIV infection may give birth to lower birth weight babies, who are then at higher risk of complications and death. We know from previous research on children and adults that malnutrition is not a necessary part of the natural history of HIV disease and can, therefore, be prevented.

Neonates may need an alternate source of nutrition for breastfeeding and will likely need a very nutrient-dense supply of foods for weaning around 4-6 months. Children have the added burden of growth and development, which can be quickly compromised. Lack of weight gain and low weight for age is an indicator of a problem. Length for age and head circumference compromises are particularly indicative of long-term and protein deficiency problems. After stunting and head circumference problems occur, diminished mental capacity is just around the corner as a consequence of inadequate calories, protein, and certain micronutrients, such as iron and iodine.

Children continue to grow and the development, growth spurts, and sex hormone alterations are calorie, protein, and micronutrient sensitive. Each of these stages for children is independently important for full development as an adult. Once the development to an adult stage is completed, the nutrient deficiencies (while they are still detrimental) are less quick to cause severe compromise to function and survival.

The future holds projected high burdens of orphans and vulnerable children who may or may not be positive but who have lost one or both parents to HIV/AIDS. This would be important for USDA especially since it administers the U.S. Food for Progress 416b and Global Food for Education programs internationally to use food aid in school feeding programs. I would suspect that their interest in Africa is motivated by better utilizing these resources.

7. What bulk food items are appropriate to send to patients with HIV/AIDS in Africa?

So, to respond to this question, bulk food items need to take into account what is missing and needed in various countries and districts that are targeted. Currently available blends and ingredients both have a place and something very important to offer.

It might be said that it could be better to enhance an indigenous food supply than to replace it and to enhance local sustainable capacity than to supply all needs from remote sources. The ideal is to use local food supplies and provide the enhancement required to meet the needs of both healthy and diseased populations with culturally-acceptable (this can be tested). In this case, fortificants such as micronutrient or protein supplementation foods and supplies may be most appropriate. If calories are a problem, then calorie-dense foods could be a priority. If protein is a problem, then high-quality protein will be important (particularly in people of African descent who may be predisposed to kidney problems). If fruits and veggies are absent, then micronutrient-dense choices are in order. Food sources and toxicity problems with nutrients are listed in the ADA-published booklet "Living Well with HIV/AIDS."

In some situations (though it is probably rare in the USDA-targeted sites), there may be a wide variety of foods that are already available. This would require some infrastructure building for delivery of local foods. In these cases, ingredient-types of foods should be considered to enhance currently available supplies, to meet seasonal shortfalls, or even out ongoing needs.

Seasonal availability and areas hard-hit by HIV infection may require more full feeding. Seasonal availability often leaves a significant shortfall of food supplies. A fuller supply of commodities that supply most or all nutrient requirements may be needed to overcome such seasonal variations in food supplies. In such a case, balanced macronutrients and micronutrients can be found in such items as micronutrient-enriched corn-soy blend or wheat-soy blend. In areas of untreated HIV infection, special attention should be paid to protein supplies (especially because less labor intensive local crops are likely to be protein-poor) and proper use and handling of seasonal micronutrient-dense fruits and vegetables.

In some cases emergency feedings for refugees (for instance) turn into longer-term needs and a fuller supply of foods and nutrients will be required. A fuller nutrient supply would also be in order for breastfeeding alternates and weaning foods.

In any case, a local and/or regional needs and assets assessment is indicated to better assure that real needs are identified, appropriate foods are programmed, and viable solutions are offered.