

# Good Nutrition is Essential for People on ART

## Nutrition and HIV/AIDS

There is a growing body of evidence demonstrating that food and nutrition support are essential for keeping people living with HIV (PLHIV) healthy for longer and for improving the effectiveness of treatment. As a UNAIDS cosponsor, the UN World Food Programme works with national governments, donors, the private sector and other partner organizations to provide nutritional support to patients on anti-retroviral treatment. The goal of this support is to improve clients' treatment uptake and adherence, reduce treatment side effects, and support improvement of nutrional status, resulting in increased treatment success. When complemented with support for the household, it can also protect peoples' livelihoods and reduce the likelihood of negative coping behavior.

## Providing Nutrition and Food Assistance can Support Treatment Uptake, Adherence and Success:

- HIV has profound consequences on nutritional status. People are often food-insecure and malnourished before infection, and disease becomes a cause of malnutrition through its effect on metabolism and the ability to ingest and digest food. For those on treatment, good nutrition helps to manage side effects.
- HIV also disrupts livelihoods in that PLHIV often lose the ability to earn an income, thereby leading to more food insecurity.
- Mortality in the first months of treatment has been shown to be two to six times higher in low-income than in high income settings. This is most likely related to malnutrition – which weakens the immune system above and beyond the effects of HIV.
- People in low-income settings only present for treatment at an advanced stage of disease, when part of their malnutrition may already be disease-induced.[1] Nutrition and/or food support needs, therefore, to be an integral part of life saving treatment regimes.[2]

## PLHIV have Increased Energy Requirements

Adults need 10 percent more calories at the asymptomatic stage and up to 30 percent more calories as the disease progresses. Similarly, symptomatic HIV-positive children have a 50 to 100 percent increase of calorie needs compared to HIV-negative children.

**Nutritional support, food assistance and other safety nets mitigate the economic impact of HIV/AIDS** on individuals and their

# Good Nutrition is Essential for People on ART

households by relieving them of the double burden of rising expenses and reduced household income.

## HIV and Tuberculosis

HIV infection and malnutrition are major risk factors for active TB. Malnutrition is generally more severe in people with HIV and TB co-infection than people with either disease alone.

A study in Zambia of clients who survived more than 6 months on ART showed that early weight gain was associated with lower risk of mortality after (but not prior to) six months of treatment.[3]

A similar study in Kenya and Cambodia reported an association between weight gain at 3-6 months and subsequent survival, which was more pronounced among clients with lower baseline BMIs.[2]

## What is the evidence to support the link between nutritional support and treatment success?

- As infection progresses, PLHIV lose weight resulting in a low BMI, which is a major risk factor for disease progression and mortality. Mortality risk among malnourished patients that start ART is 2-6 times higher compared to non-malnourised patients and this risk is independent of CD4 count (indicating immune system performance).[2]
- In order to regain weight lost, HIV-infection and opportunistic infections including TB need to be brought under control with ART and other medication and the patient needs to consume an adequately nutritious diet that helps to rebuild the tissues that were lost, i.e. fat mass and muscles.
- The higher mortality risk due to low BMI is most pronounced during the treatment initiation and stabilization period (the first 3-6 months), when clients experience the side effects of ART for the first time and need to recover from weight loss often induced by the disease. Similar challenges are experienced by TB patients.
- Foods therefore also play a role in mitigating side effects. In addition, many drugs used for ART and the treatment of HIV-related infections interact with food intake and/or absorption.

## What kind of nutritional rehabilitation/ food assistance is provided for PLHIV?

- The goal is to assist people in the first six to eight months of treatment. The selection of food products to be used during the different phases of treatment needs to be based on a careful evaluation of factors, including the existing diet, nutritional needs and the extent to which patients themselves are able to adquately modify their diet.
- In such cases, they may receive ready to eat food packed with added vitamins and minerals. In all cases, providing 1 RNI of micronutrients is critical as well as ensuring macronutrients are provided to meet the increased daily energy needs. Another important factor to consider is cost effectiveness.
- Other programmes, such as those aimed to mitigate the economic and nutritional effects on individuals and their households, may use an expanded toolkit including cash and food vouchers to improve food security while supporting local markets.
- **WFP is supporting treatment programmes through food, voucher and nutritional support in 47 countries and in 2009 reached approximately 2.9 million beneficiaries.**


1. Koethe JR, Heimburger DC, Nutritional aspects of HIV-associated wasting in sub-Saharan Africa, Am J. Clin Nutr 2010:91:1138S-42S.
2. Babameto, G. and Kptler, D,P. 1997. Undernutrition in HIV infection. Gastrenterol Clin North Am 26:393-415.
3. Koethe JR, Lukusa A., Giganti MJ, et al. Association between weight gain and clinical outcomes among malnourished adults intitiating antiretroviral therapy in Lusaka, Zambia. J. Acquir Immune Defic Syndr. (Epub ahead of print 2 september 2009).