

## Recommendation for the Nutrient Requirements for People Living with HIV/AIDS

February 2007



The nutrient requirements for people living with HIV/AIDS differ from those for non-HIV-infected individuals. These recommendations are based on the report of the May 2003 WHO technical consultation on nutrient requirements for people living with HIV/AIDS, which is available at

[http://www.who.int/nutrition/publications/Content\\_nutrient\\_requirements.pdf](http://www.who.int/nutrition/publications/Content_nutrient_requirements.pdf).

Current evidence suggests that as the HIV infection progresses, the nutrient requirements change. The requirements are different for the two distinct phases of HIV infection, which are characterized by the absence or presence of illness symptoms: asymptomatic and symptomatic.<sup>1</sup>

### 1. Energy

Percentage increases refer to increases over the intake levels recommended for healthy non-HIV-infected individuals of the same age, sex, and physical activity level.

#### 1.1 Adults and adolescents

- During the **asymptomatic** phase, energy requirements **increase by 10 percent**.
- During the **symptomatic** phase, energy requirements **increase by 20 to 30 percent**.

**Pregnant and lactating women** living with HIV/AIDS should follow the same recommendations given above for adults and adolescents living with HIV/AIDS. In addition to the extra energy requirements due to HIV infection, it is important to keep in mind that pregnant and lactating women need to consume extra energy, protein and micronutrients required by pregnancy or lactation.

#### 1.2 Children

- During the **asymptomatic** phase, energy requirements **increase by 10 percent**.
- During the **symptomatic** phase with **no weight loss**, energy requirements **increase by 20 to 30 percent**.
- During the **symptomatic** phase with **weight loss**, energy requirements **increase by 50 to 100 percent**.

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<sup>1</sup> WHO classifies HIV infection into four clinical stages: Clinical Stage I: asymptomatic, normal activity. Clinical Stage II: symptomatic, ambulatory, unintentional weight loss < 10%. Clinical Stage III: symptomatic, in bed <50%, unintentional weight loss > 10%. Clinical Stage IV: symptomatic, in bed >50%, HIV wasting syndrome. Asymptomatic phase refers to Clinical Stage I, and symptomatic phase refers to Clinical Stages II-IV.

Practically, it is often difficult for children experiencing opportunistic infections and weight loss to consume 50 to 100 percent more energy than normal levels. Therefore, it is also important to encourage children to consume additional food *following* bouts of illness and weight loss.

## 2. Protein and Micronutrients

Based on current evidence, protein and micronutrient requirements for all groups – adults, adolescents, children, pregnant and lactating women – of people living with HIV/AIDS are the same as for healthy non-HIV-infected individuals of the same age, sex, and physical activity level.

## 3. General Considerations

In order to achieve and maintain good health, all people, regardless of their HIV status, need to obtain adequate nutrition through consumption of healthy, balanced diets.

The above nutrient requirements for people living with HIV/AIDS do not consider pre-existing malnutrition. Hence, if an HIV-infected individual suffers from deficiencies in specific micronutrients or macronutrients (energy and protein), higher levels of intake may be required to compensate for the deficiencies.

Many people living with HIV/AIDS are already burdened with a lack of access to a good quality diet and suffer from malnutrition and especially micronutrient malnutrition. Programs addressing the nutritional status of people living with HIV/AIDS should be aware of the endemic problem of poor diet and malnutrition.

Consumption of additional energy by people living with HIV/AIDS should not lead to reduction in consumption of protein and micronutrients. When possible, people living with HIV/AIDS should meet their additional energy needs by increasing consumption of foods with high nutrient densities, rather than increasing consumption of high-energy foods that are low in protein and micronutrients (such as high fat and high sugar foods).

The above recommendations are for all people living with HIV/AIDS, regardless of whether or not they are taking antiretroviral (ARV) drugs. However, ARVs and other medications can interact with food and nutrients, which may require specific food and nutrition responses to minimize negative effects on nutritional status, medication efficacy, and adherence to medications. As access to ARVs continues to increase in resource limited settings, there is a need to better understand the impacts of ARVs on undernourished populations and the role nutritional status plays in ARV efficacy and side effects.



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