



## Malnutrition in HIV Patients and their Food Consumption Factors

Mehmet Ronan\*

Departments of Nutrition, Medical University of Vienna, Vienna, Austria

### DESCRIPTION

Malnutrition is a common and serious complication of Human Immunodeficiency Virus (HIV) infection that affects the immune system, the quality of life and the survival of People Living with Human Immunodeficiency Virus (PLHIV). Malnutrition can be defined as undernutrition (low body weight, low muscle mass, low fat mass) or over nutrition (overweight or obesity). Both types of malnutrition can have negative consequences for PLHIV, such as increased risk of opportunistic infections, faster disease progression, reduced response to Antiretroviral Therapy (ART) and higher mortality.

HIV can directly affect the metabolism and the absorption of nutrients by infecting cells in the gastrointestinal tract, liver and other organs. HIV can also increase the energy and protein requirements of the body due to increased inflammation and immune activation. Moreover, HIV can reduce appetite and cause nausea, vomiting, diarrhea and oral lesions that interfere with food intake. PLHIV are more susceptible to infections by bacteria, viruses, fungi and parasites that can cause diarrhea, fever, weight loss, anemia and malabsorption of nutrients. Some common opportunistic infections associated with malnutrition in PLHIV are tuberculosis, candidiasis, cryptosporidiosis and cytomegalovirus.

Chronic condition of small intestine can affect its structure and function, leading to inflammation, increased permeability and reduced absorption of nutrients. Environmental enteric dysfunction is common in low-resource settings where PLHIV are exposed to poor sanitation, hygiene and water quality. Environmental enteric dysfunction can also impair the response to ART and oral vaccines. Poverty, food insecurity, lack of access to health care and social stigma can limit the availability and affordability of nutritious food for PLHIV. These factors can also affect their adherence to ART, their mental health and their coping strategies. These include age, gender, genetic factors, co-infections (such as hepatitis B or C), drug interactions, substance abuse and lifestyle behaviors (such as smoking or physical

inactivity). The food consumption patterns of HIV patients vary depending on their nutritional status, their stage of disease, their access to food and their cultural preferences. However, some general recommendations can be made to optimize their nutritional intake and prevent or treat malnutrition.

PLHIV need more energy than healthy individuals to maintain their body weight and support their immune system. The energy requirements depend on the degree of weight loss, the presence of opportunistic infections and the use of ART. The World Health Organization (WHO) recommends that asymptomatic PLHIV should consume 10% more energy than healthy individuals, while symptomatic PLHIV should consume 20%-30% more energy than healthy individuals. For PLHIV who are underweight or have severe infections, the energy intake should be increased by 50%-100%.

The protein requirements depend on the degree of weight loss, the presence of opportunistic infections and the use of ART. The WHO recommends that asymptomatic PLHIV should consume 10% more protein than healthy individuals, while symptomatic PLHIV should consume 50%-100% more protein than healthy individuals. The protein intake should be balanced between animal and plant sources and should include essential amino acids. The micronutrient requirements depend on the degree of malabsorption, the presence of opportunistic infections and the use of ART.

The WHO recommends that PLHIV should consume a balanced diet that includes fruits, vegetables, whole grains, legumes, nuts and seeds. In addition, PLHIV may benefit from taking micronutrient supplements that contain vitamins A, B complex, C, D, E and minerals such as zinc, selenium, iron and iodine. The fluid requirements depend on the degree of fluid loss, the ambient temperature and the activity level. The WHO recommends that PLHIV should drink at least 8 glasses of clean water per day or more if they have diarrhea or fever. They should also avoid alcohol, caffeine and sugary drinks that can dehydrate them further.

**Correspondence to:** Mehmet Ronan, Departments of Nutrition, Medical University of Vienna, Vienna, Austria, Email: gednel@orea.gr

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## CONCLUSION

Malnutrition is a major challenge for PLHIV that requires a comprehensive and multidisciplinary approach. PLHIV should receive nutritional assessment, counseling and support as part of their HIV care. They should also receive ART and treatment for opportunistic infections to improve their nutritional status and outcomes. Furthermore, they should consume a balanced and

adequate diet that meets their energy, protein, micronutrient and fluid needs. By doing so, they can enhance their quality of life, slow down disease progression and reduce mortality. Therefore, they should follow food safety practices such as washing their hands before eating, washing and peeling fruits and vegetables, cooking food thoroughly, avoiding raw or undercooked meat, eggs and seafood, storing food properly and avoiding leftovers.