

## Short Communication

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# Nutritional Issues in HIV/AIDS: An Overview of Reviews to Inform Evidence

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## Abstract

This short communication was addressed to explore the nutritional issues in people living with HIV/AIDS through a descriptive overview of published reviews. Human immunodeficiency virus (HIV) infection and its ensuing Acquired immunodeficiency syndrome (AIDS) poses a significant bio-psychosocial impact on the person, society and nation which directly or indirectly influences food intake and procurement leading to malnutrition and nutritional deficiencies, or HIV enteropathy. Appropriate understanding of the nutritional issues in HIV/AIDS would enable healthcare providers to equip themselves with adequate knowledge and skills to explore dietary patterns of people living with HIV/AIDS in order to effectively improve their quality of life.

**Keywords:** Nutritional Immunology; Dietary Immunology; Clinical Nutrition; HIV/AIDS.

This short communication was addressed to explore the nutritional issues in people living with HIV/AIDS through a descriptive overview of published reviews.

Anabwani and Navario [1] illustrated the important additive role of nutritional and micronutrient deficiencies in immune degradation and impaired development in children of Botswana, South Africa, and Uganda. The authors recommended a careful implementation of antiretroviral drugs, complemented by simultaneous efforts to ensure proper nutrition among HIV-infected children.

Bacon [2] emphasized that nutritional therapy preserves body weight, particularly lean body mass and this is important since people with HIV disease are prone to weight loss with an understanding that

nutrition and diet also play an important role in regulating the immune system.

Butensky [3] opined that nutrition was not only an important component of health but also the levels of specific nutrients could affect disease expression in HIV. The author in this review thus suggested the important role for micronutrients in the treatment of HIV disease which could affect the overall outcomes and quality of life of these patients.

Colecraft [4] said, "HIV/AIDS was associated with biological and social factors that affect the individual's ability to consume and utilize food and to acquire food, and these biological and social factors lead to poor nutritional status and weight loss, which are an important cause of morbidity in individuals infected with HIV, resulting in a poor quality of life; with weight loss being an important predictor of death from AIDS".

Hendricks et al [5] discussed the implications for food-based dietary guidelines (FBDGs) for HIV-exposed and -infected children and also investigated the nutritional consequences of HIV infection and nutritional requirements along with programs and guidelines to address undernutrition and micronutrient deficiency in these children. The authors found that more than 50% children were underweight and stunted, while more than 60% had multiple micronutrient deficiencies.

Keithley et al [6] outlined the benefits of nutritional interventions in HIV as follows; "Effective management of HIV-infected patients with nutritional alterations would result in fewer secondary infections and hospital admissions, better clinical outcomes, and lower healthcare costs."

Lindegren et al [7] listed that the integration of HIV/AIDS and maternal, neonatal, child health and

nutrition services (MNCHN), including family planning (FP) was a key strategy to reduce maternal and child mortality and control the HIV/AIDS epidemic. The authors evaluated the impact of integrating MNCHN-FP and HIV/AIDS services on health, behavioral, and economic outcomes through a systematic search of Cochrane Central Register of Controlled Trials (CENTRAL), Cumulative Index to Nursing and Allied Health Literature (CINAHL), EMBASE, MEDLINE (via PubMed), and Web of Science / Web of Social Science. The authors included twenty peer-reviewed articles representing 19 interventions and found that "most studies integrated FP with HIV testing or HIV care and treatment. Overall, HIV and MNCHN-FP service integration was found to be feasible across a variety of integration models, settings and target populations. Nearly all studies reported positive post-integration effects on key outcomes including contraceptive use, antiretroviral therapy initiation in pregnancy, HIV testing, and quality of services."

Mittal [8] explained that a HIV infected child has increased caloric needs, with multiple factors interfering with adequate nutritional intake. There is a need for nutritional support to maintain optimum nourishment during the symptomatic period, in order to prevent further deterioration of the nutritional status during acute episodes of infection, and to improve the nutritional status during the stable symptom free period.

Smitand Tang [9] emphasized assessment of nutritional status including any combination of biochemical and body composition measurements, dietary intake assessment, and metabolic tests in order to identify metabolic, endocrine, and gastrointestinal (MEG) disorders in IV drug abusers. The authors reviewed conference abstracts and found, "The most commonly reported methods for dietary intake included 24-hour recalls, food records, and food frequencies. The commonest methods used for measuring body composition included height, weight, bio-impedance, and dual-energy X-ray absorptiometry (DEXA). Biochemical measurements included various blood nutrients, lipids, and albumin."

Suttajit [10] opined, "The nutritional problems in HIV/AIDS contribute to health and death in HIV+/AIDS patients by inducing weight loss, lean tissue depletion, lipotrophy, loss of appetite, diarrhea, and the hypermetabolic state thereby increasing risk of death. "Studies consistently showed that serum antioxidant vitamins and minerals decrease while oxidative stress increases during AIDS progression. Probiotics or lactic acid bacteria and prebiotics are

sometimes given on the presumed basis that they help maintain integrity of mucosal surfaces, improve antibody responses and increase white blood cell production."

Velasco-Benítez [11] classified the HIV infection based upon several digestive, hepatic, and nutritional manifestations in children, according to the Centers for Disease Control and Prevention. Early recognition of HIV enteropathy and appropriate management should be incorporated into nutritional care practices of infected HIV children.

Walseket al [12] summarized, "etiologies of HIV-associated nutritional deficiencies, reviewed important components of nutrition assessment (including nutrition-related side effects of approved medications commonly used in HIV disease), provided an overview of common nutritional problems and interventions, and listed some available nutritional resources".

Human immunodeficiency virus (HIV) infection and its ensuing Acquired immunodeficiency syndrome (AIDS) poses a significant biopsychosocial impact on the person, society and nation which directly or indirectly influences food intake and procurement leading to malnutrition and nutritional deficiencies, or HIV enteropathy. Appropriate understanding of the nutritional issues in HIV/AIDS would enable healthcare providers to equip themselves with adequate knowledge and skills to explore dietary patterns of people living with HIV/AIDS in order to effectively improve their quality of life.

Although palliative care is the mainstay therapeutic approach for terminally ill patients with HIV/AIDS, researchers and clinicians need to be aware of the questionable under-reporting in palliative care journals [13] in order to improve the quality and quantity of science on HIV/AIDS and diet/nutrition.

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