

# Links Between Nutrition and HIV Infection

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# Nutrition and HIV Statistics

- Undernutrition is the most common cause of immune system problems in the world today
  - Undernutrition is the leading cause of child death and is related to malaria, diarrhea, and other disease
  - Undernutrition kills 24,000 per day
    - (75% are under 5 years old)
- HIV kills more than 8,000-14,000 per day
  - Most vulnerable are adults of productive years and children
  - 18,000 new HIV infections per day

# Nutrition Link to HIV Infection

- Link to exposure through food/nutrition insecurity
- Link to HIV “seroconversion” through malnutrition
- Link to disease progression and opportunistic illness and symptoms

# HIV Infection Link to Nutrition

- Infection of any kind challenges nutrition
  - Part of the body's protection
  - Chronic infection is a challenge
- HIV infection affects immune systems
  - Opportunistic infections present repeated challenges
- HIV infection affects the body's organs and hormones
- Chronic HIV infection is constant injury
- Treatment for HIV infection includes symptoms, changes in hormones, and other challenges

# Overlay: Malnutrition + HIV

- Increases disease effects and severity
- Decreases survival
- Decreases productivity and ability to care and provide for family
- Increases economic and social burden of individuals, communities, and entire nations

# Specifics on HIV + Nutrition

- HIV infection (or any infection) causes muscle breakdown to improve protection by immune and healing systems
  - Chronic HIV infection chronically challenges the body
  - Weight loss is masked by fluid gain
  - Muscle loss leads to reduced ability to function and ultimately defines the timing of death
- Blocking the muscle breakdown is not advised, but blunting the breakdown can be done safely: nutrition is one of the solutions

# HIV Treatment and Nutrition

- Nutrition is part of the therapy picture
- Anti-HIV medications still require attention to nutrition to support effectiveness
  - Medications are processed by proteins in the body
  - Excess loss of protein leads to loss of medication effectiveness
  - Symptoms that block nutrition or are nutrition-related must be solved

# Summary

- Undernutrition is the major cause of immunity problem in the world today and is the most lethal form of malnutrition
- Nutritional status is challenged by HIV infection
- Nutritional compromise → disease progression
- Shoring up nutrition-related issues may
  - decrease risk for HIV infection,
  - decrease effect of HIV disease, and
  - improve survival, quality of life, and productivity