

Chapter 23

Nutrition, Cancer, and HIV Infection



Cancer

- Growth of malignant tissue
- Second most common cause of death in the United States
- Different types of cancers vary based on:
 - Characteristics, locations in the body, courses, and required treatments

Cancer (cont'd.)

- Nutrition and increased cancer risk
 - Alcohol: correlates strongly with cancers of the head and neck, colon, rectum, and breast
 - Combining alcohol and tobacco: higher incidence of head and neck cancers
 - Food preparation methods: produce carcinogens
 - Frying or boiling: meat, poultry, and fish
 - Grilled meat and fish

Cancer (cont'd.)

- Nutrition and decreased cancer risk
 - Fruits and vegetables: some protection benefits
 - Phytochemicals: antioxidant activity
 - Folate: plays roles in DNA synthesis and repair
 - Dietary fiber: may protect against colon and rectal cancers

Cancer (cont'd.)

- Nutrition and decreased cancer risk (Table 23-3)
 - Achieve and maintain a lifelong healthy body weight
 - Be physically active as part of everyday life
 - Choose a healthy diet that emphasizes plant sources
 - Limit consumption of foods that may increase cancer risk

Cancer (cont'd.)

- Nutrition and decreased cancer risk
 - Limit consumption of alcoholic beverages
 - Aim to meet nutritional needs through the diet
 - Avoid using tobacco in any form

Cancer (cont'd.)

- Nutrition therapy for cancer
 - Protein and energy
 - Ensure appropriate intakes of protein and energy
 - “*How To*” Increase kCalories and Protein in Meals
 - Managing symptoms and complications
 - Dietary considerations for specific cancers (Table 23-6)

Cancer (cont'd.)

- Nutrition therapy for cancer
 - Managing symptoms and complications
 - “*How To*” Help Patients Handle Food-Related Problems
 - Responses to strategies vary: adjustments may be necessary
 - Low-microbial diet
 - Includes only foods unlikely to be contaminated with bacteria or other microbes

Cancer (cont'd.)

- Nutrition therapy for cancer
 - Enteral and parenteral nutrition support
 - Patients with long-term or permanent GI impairment or experiencing complications interfering with food intake
 - Enteral strongly preferred over parenteral nutrition: preserve GI function and avoid infection
- Case Study – Woman with Cancer

HIV Infection

- Acquired immune deficiency syndrome (AIDS)
 - Develops from human immunodeficiency virus (HIV) infection
- Prevention of HIV infection
 - Spread by direct contact with contaminated body fluids
 - At risk individuals should undergo testing

HIV Infection (cont'd.)

- Lipodystrophy
 - Abnormalities in body fat and fat metabolism
- Causes of weight loss and wasting
 - Anorexia and inadequate food intake, altered metabolism, malabsorption, etc.

HIV Infection (cont'd.)

- Factors contributing to poor food intake
 - Emotional distress, pain, and fatigue
 - Oral infections
 - Respiratory disorders
 - Cancer
 - Medications

HIV Infection (cont'd.)

- GI tract complications
 - Attributed to opportunistic infections, medications, or the HIV infection itself
 - Advanced stages of HIV: AIDS enteropathy
- Neurological complications
 - Clinical features
 - Mild to severe dementia, muscle weakness and gait disturbances, and pain, numbness, etc.

HIV Infection (cont'd.)

- Nutrition therapy for HIV infection
 - Initial assessment
 - Evaluation of body weight and body composition
 - Follow-up measurements
 - Determine need for adjusting dietary recommendations and drug therapies
 - Weight management
 - Overweight or obese: moderate weight loss recommended

HIV Infection (cont'd.)

- Nutrition therapy for HIV infection
 - Weight management
 - Weight loss and wasting: high-kcalorie, high-protein diet may be beneficial
 - Metabolic complications
 - Insulin resistance and elevated triglyceride and LDL cholesterol levels

HIV Infection (cont'd.)

- Nutrition therapy for HIV infection
 - Metabolic complications
 - Achieve or maintain a desirable weight, replace saturated fats with mono- and polyunsaturated fats, increase fiber, limit intakes of *trans* fats, etc.
 - Vitamins and minerals
 - Supplements: usually recommended
 - Why is it important to maintain intakes that are close to DRI recommendations?

HIV Infection (cont'd.)

- Nutrition therapy for HIV infection
 - Symptom management
 - Difficulties affecting food consumption; electrolyte balance affected by vomiting and diarrhea
 - “*How To*” Help Patients Handle Food-Related Problems
 - Food safety
 - High susceptibility to foodborne illness
 - Water safety considerations

HIV Infection (cont'd.)

- Nutrition therapy for HIV infection
 - Enteral and parenteral nutrition support
 - Aggressive nutrition support: needed in later stages of illness
 - Parenteral nutrition: reserved for patients unable to tolerate enteral nutrition
 - Careful measures: avoid bacterial contamination of nutrient formulas and feeding equipment
 - Case Study – Man with HIV Infection