



UNIVERSITY OF
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EXTENSION

Institute of Food and Agricultural Sciences

Paraprofessional Update: Nutrition and HIV¹

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Learning Objectives:

The paraprofessional will:

- Identify reasons for poor calorie intake in the person with HIV.
- Describe the importance of adequate protein intake for people with HIV.
- Discuss how regular exercise can benefit the person with HIV.

Glossary of Terms

Opportunistic illness- In people with depressed immune systems, organisms that usually do not cause disease can actually cause infections and illness. Organisms include bacteria, fungi, and viruses.

Introduction

Good nutrition is the foundation of good health. For a person who is HIV positive (HIV+), good nutrition is especially important. Good nutritional status enhances medical treatment, improves the quality of life, and extends the life span of people living with HIV/AIDS. Many studies have shown that HIV+ people who are

malnourished are likely to get sick more often and have shorter survival times than more adequately nourished HIV+ people. Poor nutrition has also been observed to weaken the immune system. There are several reasons why a person who is HIV+ could be getting less food energy or calories than needed:

- Opportunistic illnesses may cause symptoms that make eating unappealing or painful.
- Fatigue and weakness can decrease appetite or affect ability to prepare meals.
- Some drugs alter the sense of taste or smell, affecting food intake.
- Obstacles to food access, including financial limitations.

Limited food intake not only affects the amount of calories consumed, but also the nutrients consumed. Even when enough food is consumed, sometimes the body cannot absorb the nutrients, a condition known as malabsorption. Malabsorption may be caused by opportunistic infections or can be drug-induced. It could also result from intestinal changes due to the HIV infection. People with HIV need to pay attention to their diet to get the best possible nutrient balance.

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Protein

Protein is important to people with HIV because it is the primary component of muscle, and plays a crucial part in many of our metabolic processes. When people with HIV lose weight, they often lose muscle, a condition called muscle wasting. It is important to eat enough calories to prevent the body from using the energy stored in the muscles. Research also suggests that a high protein diet and regular exercise (strength training) may help people with HIV avoid muscle wasting. Foods high in protein include red meat, poultry, fish, eggs, nuts, beans, peas, grains, and seeds.

The weight loss problems seen in HIV are usually related to low food intake. For the person with HIV to be able to take in enough food, dietitians often suggest eating 6 or more small meals throughout the day, rather than 2 or 3 large ones. Some protein-rich foods should be included in each of these meals.

Fat

Fat is a vital part of the human diet. We need fat to absorb the fat-soluble vitamins A, D, K, and E. Fats are also rich in calories and may help the HIV+ person consume enough calories. Fats are part of many foods but are found primarily in butter, vegetable oil, and the animal fat present in meat and dairy products.

Some people with HIV have difficulty absorbing fat, a condition that results in fatty stools, known as steatorrhea. It may be due to intestinal damage caused by opportunistic infections or by HIV itself. A person with steatorrhea absorbs very little of the fat consumed. Since it is still important to have some fat in the diet, the person with HIV could include liquid supplements containing a type of fat called MCT (medium-chain triglycerides) that is easily absorbed.

Carbohydrates

Carbohydrates are important because they provide the body with quick, easily used energy. Carbohydrates help maintain energy balance so

that the body does not have to break down stored energy sources like fat and muscle.

Carbohydrates are typically the main sources of energy in American diets.

Water

Regardless of HIV status, people should drink eight glasses (8 oz each) of water a day. This helps replace water lost in sweat and urine. Water also transports nutrients throughout the body and keeps the kidneys functioning in a healthy way. The use of certain medications can increase the need for adequate water intake. A person can lose fluids and important minerals by sweating a lot, by vomiting or with diarrhea. Sport drinks like Gatorade™ can be used to replace water and minerals in a dehydrated person.

Alcohol

The appropriateness of consuming alcoholic drinks should be discussed with the health care provider. Alcohol can interfere with medications and can affect blood lipid levels. Alcohol has the same diuretic effect as caffeine, and removes water from the body systems. Alcoholic drinks “don’t count” as part of the eight glasses of water needed every day.

Food and Medications

People with HIV have to follow complex daily regimens depending on the number and type of medications needed. Drug therapy, essential for the treatment of the HIV infection and secondary illnesses, has a direct impact on the nutritional status of the patient. This is due to the side effects of the drugs and to the conditions (empty stomach, with meals, foods to be avoided) under which the drugs are best absorbed by the body.

- Physical side effects: nausea, diarrhea, abdominal pain, mouth ulcers.
- Physiological side effects: anemia, high blood sugar, high blood lipids (fats).

It is extremely important for the person with HIV to follow instructions about food intake and

medications accurately for the drugs to be effective and to minimize the impact on the nutritional status.

Food Safety

People with HIV are vulnerable to many infections because their immune system is damaged. Keeping foods safe is very important to prevent food poisoning infections like Salmonella. The following is a list of suggestions for avoiding food poisoning.

Shopping and Storage

- Never buy products whose “sell by” or “best used by” labels have expired.
- Do not buy dented, bulging canned products.
- Put packaged meats into a plastic bag before placing in the shopping cart. This prevents meat drippings from touching other foods. Do this also when putting the meat in the refrigerator at home.
- Put chilled or frozen foods in the refrigerator as soon as possible.
- Leave eggs in their original containers. The egg rack in the refrigerator door may not be cold enough to keep the eggs safe.

Food Preparation

- Wash hands with warm, soapy water before and after touching foods.
- Carefully wash all cutting boards after chopping raw meats or vegetables.
- Never thaw frozen foods by letting them sit out at room temperature. Thaw in the refrigerator, under cold water, or defrost in the microwave.
- Cook all meats to 160°F or higher at the thickest point. Poultry should be cooked to 180°F.
- Keep the refrigerator temperature 40°F or lower.

- Store leftovers in shallow, small containers. Reheat until boiling hot or to 165°F.
- Don't keep leftovers for more than three days. When in doubt, throw it out.

Foods

- Never consume raw or under-cooked meat, poultry, or fish.
- Avoid raw eggs or foods that contain raw eggs such as Hollandaise sauce, homemade eggnog, and homemade mayonnaise. When cooking eggs, make sure yolk and whites are not runny. Egg substitutes (like Eggbeaters) or pasteurized egg products are available at grocery stores.
- Wash all fruits and vegetables. Peeling eliminates some risk of bacteria.

Exercise for physical and mental health

Regular exercise is especially important for people living with HIV/AIDS. The effects of exercise can be seen both physically and emotionally. Before starting any exercise program the person needs to consult his health care provider. The person needs to be cautious and not over exercise because this can lead to muscle breakdown. The benefits of exercise include:

- increased flexibility
- increased muscle mass
- regular bowel activity
- improved sleeping pattern
- decreased stress
- improved appetite
- increased energy level

Final words

Nutrition is always evolving and that is especially true in the area of nutrition and

HIV/AIDS. Keep informed on the latest nutrition recommendations for people living with HIV/AIDS. Our responsibility as educators, in addition to the basic information provided is to refer the person to professionals and service agencies that can assist the person and their particular needs. Refer to a registered dietitian (RD) whenever possible for personalized nutrition counseling.

Nutrition and HIV Resource List

Source: USDA Food and Nutrition Information Center (FNIC), National Agricultural Library
http://www.nal.usda.gov/fnic/pubs_and_db.html

AIDS Nutrition Services Alliance: Nutrition and HIV <http://www.aidsnutrition.org/nutrition.ssi>

Eating Defensively: food safety advice for persons with AIDS (U.S. Department of Health and Human Services)
<http://www.hivatis.org/!eatdef.html>

HIV ReSources, Inc.(Nutrition Resources Homepage)
<http://www.hivresources.com/Nutrition.htm>

Nutrition and HIV: Your Choices Make a Difference. Tennessee Department of Health AIDS Program
<http://www.thebody.com/tdoh/nuthiv/nutix.html>

Nutrition Strategies for People Living with HIV/AIDS. (American Dietetic Association)
<http://www.eatright.org/nfs/nfs42.html>

A Practical Guide to Nutrition for Persons Living with HIV Disease Canadian web site with information in English and French (The Community AIDS Treatment Information Exchange)
<http://www.catie.ca/ng.nsf>

Tufts' Nutrition and HIV
http://www.tufts.edu/med/nutrition_HIV/