NUTRITION IN PALLIATIVE CARE
By the end of this session the participants will be able to:

• Understand Nutrition intervention in Palliative
• Discuss the types of HIV & AIDS, Cancer related malnutrition
• Discuss the effects of HIV & AIDS, Cancer and life limiting illnesses on nutrition
CONTENT OUTLINE

• Relationship of nutrition cancer and HIV/AIDS
• Type of cancer and HIV/AIDS related malnutrition
• Effects of cancer and HIV/AIDS and other life threatening diseases on nutrition.
Overview and definition of human nutrition

- Nutrition is the sum of all processes involved in taking in of food and nutrients,
- Their assimilation and use for proper body functioning,
- Maintenance of health.
- The successive stages include ingestion, digestion, absorption, assimilation and excretion.
Nutrients

• They are components of food.
• They are divided into 2 major group’s - macro and micronutrients.
• Macronutrient includes Carbohydrates, proteins, fats and oils.
• Micronutrient includes vitamins and minerals.
• Others are dietary fibre and water.
RELATIONSHIP BETWEEN NUTRITION AND CANCER AND HIV/AIDS

- Both Cancer and HIV/AIDS increases energy requirements through
- Increases in resting energy expenditure,
- Reductions in food intake,
- Nutrient malabsorption,
- Complex metabolic changes that result in weight loss and wasting.
Cont....

- Repeated illnesses and/or nutritional deficiencies suppress the immune system
- Make the individual more susceptible to severe infections and/or malnutrition,
- Accelerating the progression of the disease thus reducing survival.
- HIV/AIDS further complicates and reinforces this downward spiral
- Results to a vicious cycle of malnutrition
Nutritional needs

• Nutritional needs vary with sex, age and disease status. Some comparative average nutritional needs include:
  • Adult men: 2,430 Kcal/day
  • Adult women: 2,170 Kcal/day
  • Pregnant women: 2,460 Kcal/day
  • Lactating women: 2,570 kcal/day
  • Protein intake: 1–2g of protein per kg of normal body weight.
  • Asymptomatic people
Cont...

• Asymptomatic people with HIV (those who do not have symptoms): 10% more energy than HIV-negative individuals of the same age, sex and physical activity level (i.e., 200–300 additional Kcal)

• Symptomatic people with HIV/AIDS: 20–30% more energy per day than HIV-negative individuals of the same age, sex and physical activity level
Energy Requirements

• The human body expends energy, even when at complete rest.
• Infections and diseases, increases the body energy needs depending on severity of the disease.
• Basically, a cancer and HIV/AIDS patient needs increases with the progression of the disease.
Carbohydrates and sugars

• **Sources:** maize, rice, beans, peas, potatoes, sorghum, cassava, wheat, sweet potatoes, arrow roots, millet and green bananas.

• Sugary foods are table sugar, honey, jam, cakes and biscuits
Fats and oils

- Fats and oils provide more than twice the energy of an equivalent amount of carbohydrates. They add flavor and taste to food which helps to stimulate appetite. They also maintain the function and integrity of the cell membranes structure. They also enhance the absorption of the fat soluble vitamins (A, D, E, and K).
Cont...

• They add flavor and taste to food which helps to stimulate appetite.
• They also maintain the function and integrity of the cell membranes structure.
• They also enhance the absorption of the fat soluble vitamins (A, D, E, and K).
Strategies to meet Energy requirements

• The patient need consume two or more snacks between meals to help meet the energy needs

• Make dietary adjustments and meals plans using locally available foods

• Promptly treat or manage any condition that may reduce food intake or nutrient absorption or utilization, such as diarrhea, mouth sores etc.
• If the patient is losing weight (more than 10% of the usual weight) and cannot access enough food to meet his or her energy needs, efforts must be made to provide additional food support
Micronutrients

Factors affecting the ability to meet micronutrient needs include;

• Disease location and process,
• Treatment modality and
• Medications.
• Radiation induced side effects can cause generalized poor intake, which may result in micronutrient deficiencies. Greater losses of electrolytes may occur with radiation-related nausea, vomiting and diarrhea. Chemotherapy
Tumors

• Tumors located in the digestive tract have the potential of causing obstruction resulting in poor intake and therefore micronutrient deficiency.

• Deficiency of B vitamins can arise from prolonged general malnutrition.

• Normal metabolism of micronutrients may also be altered by disease process.
Radiation

• Radiation induced side effects can cause generalized poor intake, which may result in micronutrient deficiencies.
• Greater losses of electrolytes may occur with radiation-related nausea, vomiting and diarrhea.
• Chemotherapy can have a direct effect on micronutrient levels
Strategies to meet them

• A daily multivitamin and mineral supplement may be recommended for individuals whose micronutrient intake is limited for a prolonged period.

• Due to potential interactions between specific chemotherapy medications and vitamins, patients receiving chemotherapy should consult their physician before taking supplements.
• Megadoses of vitamins and minerals are not advisable due to their potential toxicity or actual impairment of immune function (i.e. zinc).
Water and hydration

Increase Fluids

- Fluids keep your body working properly. That’s why it is important to drink eight to 10 cups of fluid a day.
Artificial nutrition and hydration

• Artificial nutrition is defined as the provision of fluids through an intravenous access to a vein.

• The healthcare professional has the obligation to inform and support those making the decision about artificial nutrition and hydration.
• The ethical matters involved in these decisions include the person’s right to refuse any unwanted medical interventions and the requirement that the healthcare professional tell the truth to the patient.
Two types of malnutrition result in wasting in HIV/AIDS:

- **Starvation-related wasting**
  - Results from voluntary or involuntary reduction in food intake
  - Can be reversed by increasing food intake on recovering from an opportunistic infection.

- **Cachexia-related wasting**
  - Results from alterations in metabolism
  - Responds poorly to increased food intake.
EFFECT OF CANCER ON NUTRITION

- Tumours may produce chemicals that change the way the body uses certain nutrients.
- The body's use of protein carbohydrates and fat may be affected, especially by tumours of the stomach or intestines.
- A patient may appear to be eating enough, but the body may not be able to absorb all the nutrients from the food.
- .
Cont....

- Diets higher in protein and calories can help correct this and prevent the onset of cachexia.
- Drugs may also be helpful.
- It is important to monitor nutrition early, as cachexia is difficult to completely reverse.
Nutrition therapy

Help cancer patients get the nutrients needed to maintain body weight and strength,

• Prevent body tissue from breaking down,
• Rebuild tissue,
• Fight infection.
Nutrition and HIV & AIDS forms a vicious cycle as follows;

**Poor Nutrition**
Weight loss, muscle wasting, weakness, micronutrient deficiency.

**Increased Nutritional Needs,**
Reduced food intake, increased loss of nutrients

**Impaired Immune System**
Poor ability to fight HIV and other infections.

**Increased Vulnerability to Infections**
Increased frequency and duration of opportunistic infections and possibly faster progression to AIDS.
Eating guidelines

Eating guidelines for cancer patients are very different from the usual suggestions for healthy eating.

• Nutrition recommendations for cancer patients are designed to help the patient cope with the effects of the cancer and its treatment.
Cancer treatments are more effective if

• The patient is well nourished and gets enough calories and protein in the diet.

• Patients who eat well during cancer treatment are able to handle higher doses of certain treatments.

• Being well-nourished has been linked to a better prognosis (chance of recovery