

Therapeutic Nutrition

Lecture I: Overview of nutrition

Definition

- **Nutrition** is the process by which the body metabolizes and utilizes nutrients
- **Nutrients** are organic and inorganic substances found in foods that are required for body functioning. Adequate food intake consists of a balance of nutrients: water, carbohydrates, proteins, fats, vitamins, and minerals.
- Foods differ greatly in their **nutritional value** (the content of a specified amount of nutrients found in a food), and no one food provides all essential nutrients.

Classes of nutrient & metabolism Essential nutrients

The body's most basic nutrient need is water. Following this, the next most important nutritional need is for nutrients that provide energy.

The energy-providing nutrients are:

1. Carbohydrates.
2. Fats.
3. proteins. These will be referred to as **macronutrients** (because they are needed in large amounts to provide energy) and,
4. Vitamins and minerals will be referred to as **micronutrients**. Vitamins and minerals are required in small amounts to metabolize the energy providing nutrients.

Factors Affecting Nutrition

1. Development

- People in rapid periods of growth (i.e., infancy and adolescence) have increased needs for nutrients.
- Elders, on the other hand, need fewer calories and dietary changes in view of the risk of coronary heart disease, osteoporosis, and hypertension.

2. Gender

- Nutrient requirements are different for men and women because of body composition and reproductive functions.
- The larger muscle mass of men translates into a greater need for calories and proteins. Because of menstruation, women require more iron prior to menopause than men do. Pregnant and lactating women have increased caloric and fluid needs

3. Ethnicity and Culture

- Ethnicity often determines food preferences.
- Traditional foods (e.g., dates, meat, and rice for Arabs, rice for Asians, pasta for Italians, and curry for Indians).
- Food preference probably differs as much among individuals of the same cultural background as it does general) between cultures.
- Not all Italians like pizza, for example, and many undoubtedly enjoy Mexican food.

4. Beliefs about Food

- Beliefs about effects of foods on health and well-being can affect food choices.

- Many people acquire their beliefs about food from television, magazines, and other media.
- For example, some people are reducing their intake of animal fats in response to evidence that excessive consumption of animal fats is a major risk factor in vascular disease, including heart attack and stroke.

5. Personal Preferences

- Individual likes and dislikes can be related to typical food and familiarity. Some adults are very adventurous and eager to try new foods.
- Others prefer to eat the same foods repeatedly. Preferences in the tastes, smells, flavors (blends of taste and smell), temperatures, colors, shapes, and sizes of food influence a person's food choices.
- For example, some people may prefer sweet and sour tastes to bitter or salty tastes. Textures play a great role in food preferences.
- Some people prefer firm to soft, tender to tough, smooth to lumpy, or dry to moist.

6. Religious Practices

- Religious practice also affects diet. Islam prohibits eating carnivorous animals, pork, alcohol intake, and meat from animals not prepared in the Halal way (that is, properly slaughtered).

7. Lifestyle

- Certain lifestyles are linked to food-related behaviors.
- People who are always in a hurry probably buy convenience grocery items or eat restaurant meals (or junk food).
- People who spend many hours at home may take time to prepare more meals.
- Individual differences also influence lifestyle patterns (e.g., cooking skills, concern about health).
- Some people work at different times, such as evening or night shifts.

- They might need to adapt their eating habits to this and also make changes in their medication schedules if they are related to food intake.

8.Economics

- Not all persons have the financial resources for extensive food preparation and storage facilities.
- The quality and quantity of a person's food can be affected by their Socio-economic status.
- The nurse should not assume that all clients have their own resources to buy fruits, meat, or higher-fat and -protein foods.

9.Medications and Therapy

- The effects of drugs on nutrition vary considerably.
- They may alter appetite, disturb taste perception, or interfere with nutrient absorption or excretion.
- Nurses need to be aware of the nutritional effects of specific drugs when evaluating a client for nutritional problems.
- Therapies (e.g., chemotherapy and radiation) prescribed for certain diseases may also adversely affect eating patterns and nutrition.
- Oral ulcers, intestinal bleeding, or diarrhea resulting from the toxicity of antineoplastic agents used in chemotherapy can seriously diminish a person's nutritional status.

10. Health

- An individual's health status greatly affects eating habits and nutritional status.
- The lack of teeth, ill-fitting dentures, or a sore mouth makes chewing food difficult.
- Difficulty swallowing (dysphagia) due to a painfully inflamed throat or a narrowing of the esophagus can prevent a person from obtaining adequate nourishment.

- Disease processes and surgery of the gastrointestinal tract can affect digestion, absorption, metabolism, and excretion of essential nutrients.
- Gastrointestinal and other diseases also create nausea, vomiting, and diarrhea, all of which can adversely affect a person's appetite and nutritional status.

11. Advertising

- Advertising is thought to influence people's food choices and eating patterns to a certain extent.
- Of note is that such products as coffee, frozen foods, and soft drinks are more heavily advertised than such products as bread, vegetables, and fruits.
- Convenience foods (frozen or packaged and easy to prepare) and take-out (fast) foods, snack foods, candy, soda, and sugared cereals are heavily advertised over fresh, healthy foods. In many countries of the Arab world,
- food advertisements must have Ministry of Health approval to be targeted to a certain audience.
- In the Arab world there has been an increase in advertising that targets elders in particular and encourages use of herbs and supplements, which require regulation according to the food and health system.
- Some of these products are nutritionally safe whereas others are not and can cause interactions with medications they might be taking or cause unexpected side effects.

12. Psychological Factors

- Although some people overeat when stressed, depressed, or lonely, others eat very little under the same conditions.
- Anorexia and weight loss can indicate severe stress or depression.

Nutrients have three general functions in the body, as follows:

1. They provide energy.
2. They build and repair body tissues and structures.
3. They regulate all the metabolic processes that maintain homeostasis and support life.

Clinical signs of good nutritional status:

1. Bright eyes, clear, no fatigue circles.
2. Good appetite and normal digestion.
3. Normal weight and height according age.
4. Lips good color, moist.
5. Tongue good pink color, no lesions.
6. Skin smooth, no pigmentation.
7. Muscles, well developed.
8. Sleeps well at night.
9. Teeth and skeleton, straight, no malformation.
10. Legs, feet, no tenderness, weakness, swelling.

