

Nutrition



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By

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Introduction

- The role of nutrition in public health and preventive medicine is self evident, people must eat to live.
- Both inadequate and excessive food intake lead to adverse health consequences and contribute to major causes of morbidity and mortality in both developed and developing

Nutrition

- refers to nourishment that sustains life , is the science and art of human nutrition , both focus on nourishing human life . they do so in many ways , from the moment of conception until death . the body needs energy to carry out vital functions , such as breathing , in addition people need energy to support physical activity . there fore nutrition may be defined as the science of food, the nutrients and other substances therein health and disease , and the balance in relation to health and disease, and the processes by which the organism ingests, digests , absorbs, transports , utilizes and excretes food substances .
- in addition , nutrition must be concerned with social, economic, cultural and psychological implications of food and eating. It is also includes an evaluation of nutritional status and the effect on person health of inadequacy of imbalance of nutrients consumed.

Nutrients:

- These can be divide into **six** main categories :-
- Macronutrient :- **Carbohydrates, Fat, Protein.**
- These are called macronutrients, such substances supply energy and build tissue.
- Micronutrients :- **Vitamins and Minerals.**
- These are called micronutrients which are small, non energy yielding elements and compounds, that the body uses in smaller amounts to regulate and control body processes and building certain body structure,
- and **water** which is the over all vital nutrients sustaining all life processes.

Dietary fibers :- It is important in maintaining good health, but it is not classified as nutritionally essential nutrient.

Essential or dietary essential nutrients :- Means that we must obtain the nutrient from our diet either because we lack the biochemical machinery to manufacture it, or we can not make enough of it.

Nutrition Care :- Is the application of the art and science of nutrition to the feeding of people, it deals with assessments of nutritional status, planning of meals according to physiological, psychological state of persons in addition to customs and habits of the people. The over all aim of nutrition care is to improve or maintain good health through proper nutrition.

- Nutrition Education :- The process by which beliefs, attitudes, environmental influences, and understanding about food lead to practices that are scientifically sound, practical and consistent with individuals needs and available food.
- **Recommended Dietary Allowances (RDA)**
The estimated amount of a nutrient (or calories) per day considered necessary for the maintenance of good health.

They are defined as the level of intake of essential nutrients considered on the basis of available scientific knowledge to be adequate to meet the known nutritional needs of practically all healthy persons. Most foods contain more than one nutrient but no single food item supplies all the essential nutrients in the amounts that are needed. A simple approach to adequate nutrition is to consume a variety of foods.

Foods can be selected from each of the Four Basic Food Group :-

- 1. The foods from the milk group –are major sources of calcium, protein and riboflavin .**
- 2. Items in the meat Group –supply protein, fat, iron and other minerals as well as several vitamins.**
- 3. Fruits and vegetables group –are rich in vitamin C and precursors of vitamin A.**
- 4. While bread and cereal group –provide carbohydrate, several B vitamins and iron .**

In addition to the foods from the four basic food groups, other items (e.g. tea , and certain spices)can provide nutrients and antioxidants that have been claimed to be good for health. Tea is a rich source of manganese and flavonoids which have antioxidant properties. Black pepper is a good source of chromium

Factors determining food choices

- **Physical factors** : food supply available, food technology and geography, agriculture distributing personal economic and income, sanitation, housing season, climate, storage and cooking facilities .
- **Social factors**: advertising, culture, education (general .. nutrition), political and economic policies religion and social custom, social class, role of social problems (poverty or alcoholism).
- **Physiological factors**: Allergy, disability, health and disease status, personal food acceptance, needs during childhood, pregnancy, energy or nutrient therapeutic diet .

Calorie

- Is the energy value of food, is expressed in terms of a unit of heat, this represents the amount of heat required to raise the temperature of 1Kg (1000g)water by 1°C .the calorie used in the study of metabolism is the large calorie or kilo calorie (cal or kcal) (1000calorie)
- Fuel factor: or the kilo calorie value (energy potential) of food nutrients, that is the number of kcal (cal) that 1 gram of the nutrient yields when oxidized. The cal fuel factor for CHO is 4, for protein 4, and fat is 9cal . the basic figures are used in computing diets and energy values of foods (10grams of protein yields 40 cal).

The image features two vibrant yellow roses in full bloom, positioned diagonally across the frame. They are set against a dark teal background, with several green leaves and a dark brown stem visible. The text 'Thank you very much' is overlaid in a stylized, reddish-brown font. The words 'Thank you' are at the top, and 'very much' is below it, centered between the two roses.

Thank you

very much