

Introduction to nutrition

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Food

- Food can be defined as anything solid or liquid which when swallowed, digested and assimilated in the body provides it with essential substances called nutrients and keeps it well. It is the basic necessity of life.

Food

- Food supplies energy, enables growth and repair of tissues and organs. It also protects the body from disease and regulates body functions.



Nutrition

- Nutrition is defined as the science of foods, nutrients and other substances they contain; and of their actions within the body including ingestion, digestion, absorption, metabolism and excretion.
- While this summarises the physiological dimensions, nutrition has social, psychological and economic dimensions too.



Nutrients

- Nutrients are the constituents in food that must be supplied to the body in suitable amounts. These include carbohydrates, proteins, fats, minerals, vitamins, water and fibre. We need a wide range of nutrients to keep ourselves healthy.



- Nutrition is the study of nutrients in food, how the body uses them, and the relationship between diet, health, and disease.
- Nutritionists use ideas from molecular biology, biochemistry, and genetics to understand how nutrients affect the human body.
- Nutrition also focuses on how people can use dietary choices to reduce the risk of disease, what happens if a person has too much or too little of a nutrient, and how allergies work.

- Nutrients provide nourishment. Proteins, [carbohydrates](#), fat, [vitamins](#), minerals, fiber, and water are all nutrients. If people do not have the right balance of nutrients in their diet, their risk of developing certain health conditions increases.

Macronutrients

- Macronutrients are nutrients that people need in relatively large quantities.

- **Carbohydrates**
- **Proteins**
- **Fats**
- **Water**



Micronutrients

- Micronutrients are essential in small amounts. They include vitamins and minerals.

- Potassium
- Sodium
- Calcium
- Phosphorus
- Magnesium
- Zinc
- Iron
- Manganese
- Copper
- Selenium
- Vitamins



Balanced Diet

- A balanced diet is one which includes a variety of foods in adequate amounts and correct proportions to meet the day's requirements of all essential nutrients such as proteins, carbohydrates, fats, vitamins, minerals, water, and fibre.



- If the balanced diet meets the Recommended Dietary Allowances (RDAs) for an individual, then the safety margin is already included since RDAs are formulated keeping extra allowances in mind.

Recommended Dietary Allowances = Requirements + Margin of safety

- A balanced diet takes care of the following aspects.
 1. Includes a variety of food items
 2. Meets the RDA for all nutrients
 3. Includes nutrients in correct proportions
 4. Provides a safety margin for nutrients
 5. Promotes and preserves good health
 6. Maintains acceptable body weight for height

Health and Fitness

- According to World Health Organization (WHO) “Health is the state of complete physical, emotional, and social well-being, not merely the absence of diseases or infirmity.



- Physical fitness is good bodily health; it is the result of regular exercise, proper diet and nutrition, and proper rest for physical recovery. The term physical fitness is used in two ways:
 - general fitness (a state of health and well-being)
 - specific fitness (a task-oriented definition based on the ability to perform specific aspects of sports or occupations).

