

Topic :-



Food

Applied Nutrition and Dietitrics

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Food

Definition

of

Food

Food is any edible substance, whether solid or liquid, that contains nutrients required by the body for growth, energy production, repair of body tissues, regulation of body processes, and maintenance of health.

Food is one of the three basic necessities of life (air, water, and food). It provides the nutrients needed to maintain normal body functions and prevent diseases.

Definitions

by

Experts

Food :-

Any substance consumed by living organisms that supplies nutrients essential for growth, maintenance, reproduction, and health.

Nutrition :-

The science that deals with food, nutrients, and their utilization by the body.

Nutrients :-

A chemical substance in food that nourishes the body.

Features :-

- Little communication
- No therapeutic relationship
- Focus on control rather than treatment

Importance of Food

Food is essential for life because it :-

➤ Provides energy for daily activities.

➤ Promotes growth and development.

➤ Repairs worn-out body tissues.

➤ Regulates body processes.

➤ Protects against diseases.

➤ Maintains body temperature.

- Supports mental health.
- Improves immunity.
- Prevents nutritional deficiency diseases.



Maintains overall health
and well-being.

Functions of Food

Food performs three major functions :-

(A). Physiological Functions

These functions are related to the normal functioning of the body.

(1). Energy Production

Food supplies energy needed for:

Walking, Running, Studying,

Digestion, Breathing, Heartbeat,

Blood circulation, Body

temperature maintenance

Energy-giving nutrients :-

➤ Carbohydrates

➤ Fats

➤ Proteins (during starvation)

(2). Growth and Development

Food helps in :-

➡ Growth during infancy and
childhood

➡ Development during
adolescence

- Muscle formation
- Bone growth
- Tooth development

Main nutrient :- Protein

(3). Repair and Maintenance of Body Tissues

Food helps in :-

➤ Healing wounds

➤ Repairing muscles

➤ Replacing worn-out cells

➤ Recovery after illness

➤ Tissue regeneration

Proteins play the major role in
tissue repair.

(4). Regulation of Body Functions

Food regulates :-



Digestion



Hormone secretion

➤ Enzyme activity

➤ Muscle contraction

➤ Nerve transmission

➤ Blood clotting



Water and electrolyte
balance



Acid-base balance

Main nutrients involved :-

➤ Vitamins

➤ Minerals

➤ Water

(5). Protection Against Diseases :-

A balanced diet :-

➤ Strengthens immunity

➤ Prevents infections



Prevents deficiency
diseases



Promotes faster recovery
from illness

Examples :-

➤ Vitamin A prevents night blindness.

➤ Iron prevents anaemia.

➤ Vitamin D prevents rickets.

➤ Vitamin C prevents scurvy.

(6). Maintenance of Body Temperature

Food provides energy that helps
maintain the normal body
temperature of approximately 37°C
(98.6°F).

(B). Psychological Functions

Food also satisfies emotional and
mental needs.

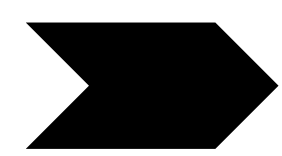
It :-

➤ Relieves hunger

➤ Provides pleasure

➤ Improves mood

➤ Reduces stress



Increases satisfaction



Promotes emotional well-
being

(C). Social Functions

Food plays an important role in society.

Examples :-

➤ Family meals

➤ Religious ceremonies

➤ Weddings

➤ Festivals

➤ Hospitality

➤ Community celebrations

Food strengthens family and
social relationships.

Classification

of

Food

Food can be classified in
different ways :-

- (1). Based on Physiological Functions
- (2). Based on Food Groups
- (3). Based on Origin

Classification Based on Food Groups

Foods are classified into
groups according to their
major nutrients and
functions.

Food Group 1 – Cereals and Millets

Examples :- include rice,
wheat, maize, jowar, bajra,
and ragi.

These foods are rich in
carbohydrates and are the
major source of energy.

Food Group 2 – Pulses and Legumes

Examples are green gram,
black gram, lentils, peas,
kidney beans, and soybean.

These foods are rich in
proteins and help in
growth, tissue repair, and
muscle development.

Food Group 3 – Milk and Milk Products

Examples include milk, curd,
paneer, cheese, and butter.

These foods are rich in
calcium and protein and
help in bone and teeth
development.

Food Group 4 – Meat, Fish, and Eggs

These foods provide high-quality protein, iron, vitamin B12, and zinc.

They help in muscle growth, tissue repair, and haemoglobin formation.

Food Group 5 – Fruits

Examples include apples,
oranges, bananas, mangoes,
guavas, and papayas.

Fruits are rich in vitamins, minerals,
antioxidants, and fibre.

They improve immunity and
prevent deficiency diseases.

Food Group 6 – Vegetables

Green leafy vegetables, carrots, tomatoes, cabbage, and broccoli are rich in vitamins, minerals, and dietary fibre.

They improve digestion and
protect against diseases.

Food Group 7 – Fats and Oils

Examples include mustard oil,
sunflower oil, butter, ghee, and
groundnut oil.

These foods provide
concentrated energy and
help absorb fat-soluble
vitamins A, D, E, and K.

Food Group 7 – Sugar and Jaggery

Sugar and jaggery provide quick energy because they contain simple carbohydrates.

However, excessive
consumption can lead to
obesity, diabetes, and
dental caries.

Classification

Based on

Origin

Foods are classified into
two groups according to
their source.

(A). Plants Food

Plant foods are obtained from different parts of plants such as roots, stems, leaves, flowers, fruits, and seeds.

Examples include rice, wheat, fruits,
vegetables, pulses, nuts, seeds, and
spices.

These foods are rich in carbohydrates,
vitamins, minerals, and fibre.

Plant foods help prevent
constipation, reduce
cholesterol levels, and lower
the risk of heart disease.

(B). Animals Food

Animal foods are obtained from animals.

Examples include milk, eggs, fish, meat, chicken, butter, and cheese.

Animal foods provide high-quality protein, calcium, iron, vitamin B12, and zinc.

They are essential for growth, muscle development, tissue repair, and bone health.