



CH-2

COMPONENTS OF

▶ FOOD

Introduction to Components of Food

- ▶ All living organisms require food. Food is essential for all living organisms as it is a source of all nutrients.
- ▶ Carbohydrates, proteins, fats, vitamins and minerals are essential components of food, these components are called **nutrients**.

Type of Food and their components

Energy-giving food	Carbohydrates and fats give energy
Body-building food	Proteins are body-building food as they help in body growth and repair of damaged parts of the body.
Protective food	Vitamins and minerals are protective food as they protect us from many diseases. They give us resistance against disease causing germs

Carbohydrates and Fats

Carbohydrates in our food are mainly sugar, starch. Starch is present in grains like rice, wheat, maize, potatoes etc.

Sugar is the sweet substance obtained from Sugar cane

Animal sources include milk, butter, ghee, cheese and meat and Plants resources like oil are rich resources of fats

Proteins

Proteins are body-building food as they help in body growth and repair of damaged parts of the body.

Animal sources like eggs, fish, meat, milk, cheese and Plant sources like pulses of beans are resource of proteins

Vitamins and Minerals

Vitamins are protective food as they protect us from many diseases.

Vitamins are A, B, C, D, K, E. They are obtained from Fruits, vegetables, fish liver oil, milk, eggs,

Balanced Diet

- ▶ A balanced diet is food intake that includes all the nutrients that our body needs in right quantities along with good amount of roughage and water.

Deficiency diseases

Vitamin/Mineral	Deficiency disease/disorder	Symptoms
Vitamin A	Loss of vision	Poor vision, loss of vision in darkness (night), sometimes complete loss of vision
Vitamin B1	Beriberi	Weak muscles and very little energy to work
Vitamin C	Scurvy	Bleeding gums, wounds take longer time to heal
Vitamin D	Rickets	Bones become soft and bent
Calcium	Bone and tooth decay	Weak bones and tooth decay
Iodine	Goiter	Glands in the neck appear swollen, mental disability in children
Iron	Anaemia	Weakness

Test for starch

- ▶ Take a small quantity of food item or a raw ingredient
- ▶ Put 2-3 drops of dilute iodine solution on it
- ▶ Observe if any change in the color of the food item
- ▶ If it turns into blue or black colour that confirms the presence of starch

Test for proteins

- Take a small quantity of food item.
- Add some water and make a paste of it.
- Add two drops of copper sulphate solution and ten drops of caustic soda solution
- Shake well. If the content turns violet, it confirms the presence of proteins.

Test for fats

- Take a small quantity of food item.
- Wrap it in a piece of paper and crush it.
- Straighten the paper and observe it.
- An oily patch on paper shows that the food item contains fat.