

**CHAPTER 01**

**FOOD COMPONENTS**

**FOOD:**

We all love food. We eat different types of food and everyone have their own favorite food. Some of us like spicy Biryani and some of us like sweets, ice creams and chocolates. Eating good food, especially with family and friends, is one of the pleasures of life.

Good foods give plenty of energy to work and enjoy. Having good food also lowers infections and keeps our immune system strong.



**What is food?**

A food is something that provides nutrients. The components of food are carbohydrates, proteins, fats, vitamins, minerals and water. Fiber is also a type of carbohydrate, helps in proper digestion.

## FOOD COMPONENTS

### Carbohydrates:

Carbohydrates are the main source of energy for the body. The body breaks carbohydrates down into glucose, acts as main energy source for the brain and muscles. The most common forms of carbohydrates are sugars, starch and dietary fiber.



### Sources:

The sources of carbohydrates include bread, fruits, vegetables, nuts, seeds, whole grains, potatoes etc. High intake of carbohydrates, lead to obesity.

Carbohydrates provide energy to keep the body breathing and alive, for movement and growth of tissues.

### Carbohydrate test:

If an iodine solution, added to the food sample, blue or black color formation indicates the presence of starch.

### Proteins:

Protein is a macronutrient and is a part of every cell in the body. Protein, found throughout the body – in muscle, bone, skin, hair, nails etc. It is made from 20 plus basic building blocks called amino acids. Protein helps the body to build and repair cells and tissues.



### Sources:

The sources of protein include seafood, meat, eggs, beans, peas, nuts, seeds and soy products. Dairy products such as milk, cheese and yogurt also contain protein. Both animal and plant foods can be excellent sources of protein.

### Protein test:

When 2% copper sulphate and 10% sodium hydroxide solution added to the food sample, if the solution turns violet or purple color, it confirms the presence of protein in food sample.

### Fats:

Fats are macronutrients that give you energy. The fats you eat give your body energy to work properly. The body uses fat as fuel and stores excess fat in fat cells. Whenever food is scarce, stored fats used up by the body. The body stores fat for protection, warmth and energy. We also need fat to keep skin and hair healthy. Fats help in the absorption of fat-soluble vitamins A, D, E and K.

**Sources:**

The sources of fats include nuts, oils, avocados, meat, dairy products, snack foods and baked goods. Eating the right amount of the right type of fat is important. Intake of excess amount of fatty foods can cause many health problems.

**Fat test:**

Place a food sample on paper. If the paper turns translucent, the sample contains fat.

Our body needs these macronutrients in larger quantities in order to function properly. Few nutrients are required in smaller quantities. They are micronutrients like vitamins and minerals to keep our body fit and healthy.

**Dietary fiber or Roughages:**

It is a type of carbohydrate body cannot digest. Eating enough fiber can prevent or relieve constipation, helping waste to move smoothly through the body and lowers bad cholesterol levels in the body. Good sources of dietary fiber include whole grains, nuts, seeds, fruits and vegetables.



### **Water:**

Water is the most abundant and most frequently overlooked component of food. Fruits contain 80-95% water, raw meat contains 60% and nuts contain 5% water. Water helps in absorbing the nutrients from food. It helps to throw out wastes like urine and sweat from our body.

All these components when supplied in proper amounts give energy, improves body functions and strengthens immune system.

