



Unit I - Topic 1

Constituents of food and their energy values

What are the Components of Food?

As per norms, there are various human rights, and access to food is one of them. It is crucial for our good health and ultimately to live and survive. It is the choices of food that affect our health and gradually depend on how we are going to spend the future days.

Good nutrition is a pivotal part of our lives that further promotes a healthy lifestyle. A perfectly curated diet, when combined with physical activities, can help us maintain a healthy weight, reduce the risks of diseases, and of course, promote overall health.

What is the Composition of Food?

Foods are made of both energy and non-energy components. The energy is obtained in the form of calories that are required by our body cells. The components of food in the form of energy include:

- **Carbohydrates** – It is the primary source of energy for our bodies. It comprises of sugars that are present in food and directly impact the blood sugar level.
- **Protein**-Protein is a crucial part of our body to repair, build, and renew the organs and damaged tissues in our body.
- **Fats** – Fats play a vital role in the freight system of transporting several vitamins throughout the body with essential fatty acids.
- **Vitamins and Minerals** – These are not required on a daily basis but still essential to healthy living.
- **Dietary Fiber** – This is a vegetable element that is not digested by our body. This only helps in intestinal regularity.



What is the Role of Nutrients For Our Bodies?

Nutrients are substances that are generally found in different foods and its constituents. It helps in driving biological activities, and hence, it is essential for our body. There are six different types of nutrients. These are:

Source of Nutrients	
Carbohydrates	Rice, Pasta, Potatoes, Milk, Sugar, Bread, Fruits
Lipids/Fats	Butter, Nuts, Margarine, Oils, Avocadoes, Olives, Seafood
Proteins	Nuts, Legumes, Dairy, Meat, Egg White, Seafood
Vitamins	Fruits, Vegetables, Grains, Cereals Dairy, Soybean
Water	Any beverage, Component of any food (vegetable and fruit)
Minerals	Red meat, Milk, Vegetables, Seafood

Note: vitamins and minerals are categorized and can be obtained through specific food sources.

Constituents of Food

The human body is built and powered by choice of food that we intake. Therefore, we should maintain a healthy diet in order to prevent future complications that arise from aging. The components of a balanced diet are:

Food Components	Functions
Proteins	It is made of a complex organic compound that contains hydrogen, nitrogen, oxygen, carbon, sulfur, and phosphorous.
Carbohydrate	These are actually hydrates of carbon and have three elements like hydrogen, oxygen, and carbon.
Fats	These are made from fatty acids and a form of alcohol called glycerol. Fats are less in oxygen and, thus, make the difference with carbohydrates.
Vitamins	Vitamins are an organic compound that acts as catalysts during the chemical reaction of metabolism.
Minerals	Make sure that a balanced diet is rich in iron, calcium, iodine, sodium phosphorous, zinc, copper magnesium, chlorine, and fluorine.



SNS COLLEGE OF TECHNOLOGY
(An Autonomous Institution)
Coimbatore.

Water	This is an inorganic substance that helps in assimilation by preparing the food.
-------	--

Why is a Balanced Diet Important?

We often take eating as granted until something major is faced through health problems. The loss of ability to eat is similar to losing a life. This is the reason, maintaining the constituents of food are crucial to living a healthy life. Now, it is not always possible to measure and intake the constituents, and thus, as a rule of thumb, it's good to follow a healthy and balanced diet.

It is said that the feeling of food depends on the person's ability to tolerate, illness, or the need for restriction. This is the reason; some people find it challenging when they are re-learning to eat after a stroke or surgery.

What is the Need For Maintaining the Constituent of Foods?

Food and its components play a major role in our lives. Whether it's a baby, young children, adolescent, or a complete grown-up man, the human body grows at a rapid rate until a particular age. The components of food are required for fueling the growth and maintaining the body after the growth is stopped. Human body cells need to grow and develop just like we do. It is actually the body parts, including cells, tissues, bones, and muscles that grow, and we, from the outer layer, see ourselves as growing. Protein is the building block for our body, and thus, it is a vital inclusion for growth and maintaining a healthy living. Protein with the combination of fats, minerals, and other ingredients provides the best nutrients to our body. The growing phase of our body needs some extra amount of nutrients when compared to the latter part.

Maintaining a good link between weight and nutrition can help people reduce the symptoms of chronic diseases and an overall decline in health. Before it's too late, consider taking steps to improve your dietary rules by introducing a well-consulted balanced diet.