

# NUTRITION

## What is Nutrition?

Nutrition is defined as the process of taking in food and converting it into energy and other vital nutrients required for life. Nutrients are the kind of substances that provide the necessary energy and biomolecules for carrying out various body functions. All the organisms in the universe need nutrients for proper growth and functioning, but they show divergence in how they fulfil their demand. Some of the animals feed on inorganic compounds to meet their requirement of nutrients, while others utilize the complex compounds. The mode of nutrition changes from one species to another species.

## Types of Nutrition

Generally, there are two types of nutrition among living organisms, namely:

- Autotrophic mode
- Heterotrophic mode

## Autotrophic Nutrition

In this mode of nutrition, organisms use simple inorganic matters, such as water and carbon dioxide in the presence of light and chlorophyll to synthesize food on their own. It is also said as the process of photosynthesis, where light energy is converted into food such as glucose, this type of organisms are called autotrophs. Some of the examples where [autotrophic nutrition](#) is observed in plants, algae, and bacteria (cyanobacteria).

[Image will be Uploaded Soon]

During the process of photosynthesis, carbon dioxide and water is converted into carbohydrates, which are stored in the form of starch in the plants. Later when plants require energy, it will be derived from the stored starch in plants. The process of photosynthesis is mainly explained in three stages: Absorption (The chlorophyll present in leaves traps the light coming from the sun). Conversion (in this light energy is converted into chemical energy and water will split into hydrogen and oxygen molecules). Reduction (this is the final stage, where carbon dioxide is reduced to form carbohydrates ). All the three events discussed above are not a continuous process and they may or may not take place sequentially.

## Heterotrophic Nutrition

All the organisms are not capable of producing food on their own, such organisms depend mainly on others for their nutrition. The organisms that are not capable of producing their own food and depend on the other organisms or sources are known as heterotrophs, and this mode of nutrition is called heterotrophic nutrition.

[Image will be Uploaded Soon]

All the animals and fungi are heterotrophs in nature, they can be of many varieties depending on their environment and the adaptations. Like some of them depend on plants for nutrition known as herbivores and others depend on an animal known as carnivores. Also, there are some heterotrophs that eat both plants and animals.

There are different heterotrophs based on their mode of nutrition given below:

- Parasites (e.g. leeches, ticks)
- Saprophytes (e.g. mushrooms)
- Holozoic (e.g. humans, dogs)

## Nutrition Food Values

### Apple Nutrition of One Raw, Unpeeled, Medium-Sized Apple (100 grams):

- Calories: 52
- Water: 86%
- Protein: 0.3 grams
- Carbs: 13.8 grams
- Sugar: 10.4 grams
- Fibre: 2.4 grams
- Fat: 0.2 grams

### Rice Nutritional Value of Brown and White rice

Nutrient Proximates	Brown rice	White rice
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Energy	82 calories	68 calories
Protein	1.83 g	1.42 g
Total Lipid (fat)	0.65 g	0.15 g
Carbohydrates	17.05 g	14.84 g
Fibre, Total Dietary	1.1 g	0.2 g
Sugars, total	0.16 g	0.03 g
Calcium	2 milligrams (mg)	5 mg
Iron	0.37 mg	0.63 mg
Sodium	3 mg	1 mg
Fatty Acids, Total Saturated	0.17 g	0.04 g
Fatty Acids, Total Trans	0 g	0 g
Cholesterol	0 g	0 g

### **Raw Peanuts Nutrition (100 grams)**

- Calories: 567
- Water: 7%
- Protein: 25.8 grams
- Carbs: 16.1 grams
- Sugar: 4.7 grams
- Fibre: 8.5 grams
- Fat: 49.2 grams

- Saturated: 6.28 grams
- Monounsaturated: 24.43 grams
- Polyunsaturated: 15.56 grams
- Omega-3: 0 grams
- Omega-6: 15.56 grams
- Trans: 0 grams

### **Milk Nutrition in 1 Cup (Around 240 ml of Milk)**

- Calories: 149
- Water: 88%
- Protein: 7.7 grams
- Carbs: 11.7 grams
- Sugar: 12.3 grams
- Fibre: 0 grams
- Fat: 8 grams

### **Do You Know?**

Which is the best nutritious food? Some of the best nutritious foods are salmon, kale, [seaweed](#), garlic, shellfish, potatoes, livers, sardines, blueberries, dark chocolates, and [egg](#) yolks. If a person needs lots of nutrients without calories, the most obvious strategy is to take dietary supplements.