



### Balanced Diet:

The food we normally eat in a day is our diet. For growth and maintenance of good health, our diet should have all the nutrients that our body needs, in right quantities. Not too much of one and too little of the other. The diet should also contain a good amount of roughage and water. Such a diet is called a balanced diet. Pulses, groundnut, soybean, sprouted seeds, fermented foods a combination of flours, banana, spinach, sattu, jaggery, available vegetables and other such foods provide many nutrients.

Eating the right kind of food is not enough. It should also be cooked properly so that its nutrients are not lost. If the vegetables and fruits are washed after cutting or peeling them, it may result in the loss of some vitamins. The skins of any vegetables and fruits contain vitamins and minerals. Similarly, repeated washing of rice and pulses may remove some vitamins and minerals present in them.

We all know that cooking improves the taste of food and makes it easier to digest. At the same time, cooking also result in the loss of certain nutrients. Many useful proteins and considerable amounts of minerals are loss if excess water is used during cooking and is then thrown away. Vitamin C gets easily destroyed by heat during cooking. Would it not be sensible to include some fruits and raw vegetables in our diet. But food rich in fats can be very harmful for us to eat. If we eat too much of fat rich foods and we may end up suffering from a condition called obesity.

**The diet which contains all the essential nutrients in the right proportion is called a balanced diet. The food we eat must have all the nutrients. It should provide the required energy. Deficiency of one or more nutrients in our food for a long time may cause certain diseases or disorders.**

### Deficiency diseases

Lack of carbohydrates, proteins, vitamins, or minerals in the diet can cause diseases. Diseases that are caused due to the lack of nutrients in the diet are called deficiency diseases. Deficiency diseases cannot be transmitted from one person to another.

### Deficiency of carbohydrates

Carbohydrates are the main energy sources. Lack of carbohydrates in the diet results in lack of energy and stamina. Labourers who does hard manual work needs more carbohydrates in his diet than a person who does his work sitting in his office.

### Deficiency of proteins

Growing children need more proteins in their diet. Lack of proteins in the diet working muscles.

Deficiency of proteins leads to a disease called kwashiorkor. Deficiency of proteins along with carbohydrate deficiency is called protein energy malnutrition. It leads to marasmus. These diseases are more common in children of rural areas.

A child suffering from kwashiorkor has some or all of the following symptoms:

Large pot-like belly, stunted growth, swelling of face and limbs (especially the feet), skin diseases, mental retardation, and diarrhea. If the treatment is started in time, improving protein intake may correct this disease.



## 6<sup>th</sup> – Components of Food II



Marasmus is more common among infants and children under 5 years of age. A child suffering from marasmus becomes very thin, shows slow body growth, lack of energy, loss of appetite, weak legs, mental retardation, poor muscle development etc.

To prevent these diseases, the government of India has started programmes like the integrated Child Development Scheme and the Mid-day meal scheme in schools.

### Deficiency of Vitamin's

List some important vitamins and their sources, functions, deficiency diseases and symptoms.

Vitamins and sources	Function	Deficiency disease	Symptoms
A Sources: green leafy vegetables, fruity, butter, egg yolk, carrots and fish	Keeps, eyes, hair and skin healthy	Night blindness	Dryness of eyes; improper vision
B1 Sources: eggs, whole grains and sprouts	Aids in digestion; maintains nervous system	Beriberi	Inflammation of nerves; digestive problems and heart abnormalities
B2 Sources: eggs, milk and green leafy vegetables	Keeps skin and mouth healthy	Skin disorders	Irritation of eyes; skin and intestinal disorders; inflammation of the tongue
B12 Sources: meat	Formation of red blood cells	Anemia	Pale skin; lack of stamina and appetite; frequent headaches
C sources: citrus fruits like lime, orange and lemon; tomatoes and sprouts	Helps to resist infections and keeps teeth, gums and joints healthy	scurvy	Loosening of teeth; spongy and bleedings gums; increased susceptibility to diseases; slow healing of wounds; weakness; pain in the limbs
D Sources: milk, fish and eggs sunlight	Aids in the normal growth of bones in children	rickets	Weak bones; joint and bone deformities like bow legs and pigeon chest; softening of ribs; protruding abdomen
K Sources: spinach,	Helps in blood clotting (to	Hemorrhage(ex cessive	Affects clotting of blood



## 6<sup>th</sup> – Components of Food II



cabbage or any other  
green leafy vegetables

stop bleeding)

bleeding)

Some vitamins are very sensitive to heat and light. For example, vitamin C is easily destroyed during cooking. Therefore, vitamin C rich food items should be eaten raw.

Scurvy was common among sailors in ancient times. Due to lack of cure, several sailors died of this disease during long voyages. In the 18<sup>th</sup> century, James Lind found that eating citrus fruits reduced the occurrence of scurvy in sailors.

