

FOOD AND ITS NUTRIENTS

L.No	Title of Lesson	SKILLS	Activity
2	Food and its Nutrients	Critical Thinking, Creative Thinking, Problem Solving and Decision Making	Understanding the importance of food in life

Summary

Food not only gives energy but also helps in growth and repair. It gives us strength to fight against diseases and helps our body to function normally. Some of our social and emotional needs can also be fulfilled by food.

Food is made of chemical substances called nutrients. They are carbohydrates, proteins, fats, minerals, vitamins, fibre and water. While the first three are required in fairly large quantities, minerals and vitamins are required in very small quantities. Each of these nutrients has a specific role in building our body. Fibre and water do not help to build the body but are crucial for the normal functioning of the body.

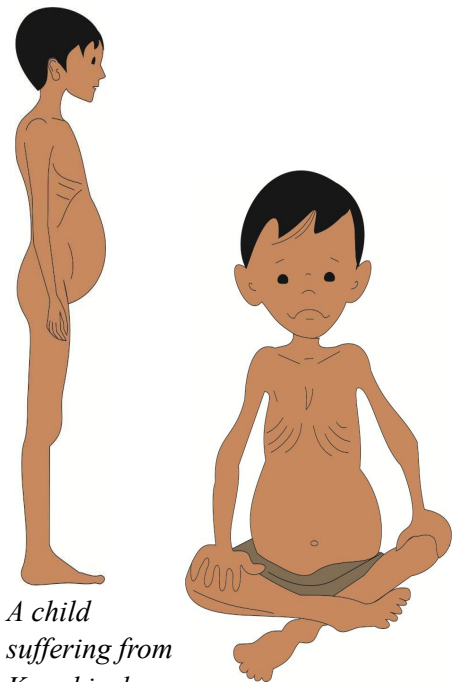
The intake of each of the above nutrients in the recommended amounts is very important. Complete absence or reduced intake of any of these nutrients in our daily diet can cause various deficiency diseases. Often this deficiency can be reversed if the missing nutrient is detected early and adequately replaced.

If we follow the thumb rule of eating a variety of foods we will be able to include all the nutrients in our diet and thus ensure good health for ourselves.

Principal Points

Deficiency diseases occur when a particular nutrient is absent from our food for a long period of time.

- Kwashiorkor is due to insufficient protein intake.
- Marasmus is due to the deficiency of both carbohydrates and proteins in the body.
- Night-blindness is caused due to the absence or lack of vitamin A in our daily diet. Those suffering from night-blindness cannot see in dim light.
- Anemia is caused due to the deficiency of iron resulting in tiredness and restlessness.
- Beri-beri is caused due to the deficiency of vitamin B. Those suffering from beri-beri may not feel hungry and will have a sore mouth.
- Scurvy is caused by absence or lack of vitamin C. It results in the swelling and bleeding of gums and slow healing of wounds.
- Goitre is caused due to the absence of iodine in diet resulting in a swollen neck.



A child suffering from Kwashiorkor

A child suffering from Marasmus

Build Your Understanding

- Fiber adds bulk to stool and prevents constipation. It is mainly present in foods from plants.
- Water keeps the body temperature constant, removes waste products from the body in the form of urine and transports food in the body.

Did You Know?

- Non-vegetarians often complain of constipation because non-vegetarian food has poor fibre content.
- In summer we need more water to make up for its loss due to sweating.
- Fats are a concentrated source of energy. They should be used with discretion. Excess intake may lead to obesity.
- Recommended mineral intake ensures healthy bones, teeth, muscles and blood.
- Milk must be an integral part of the diet during childhood and adolescence because bones grow rapidly during these stages..
- Vitamins are of two types—fat soluble vitamins (vitamins A, D, E and K) and water soluble vitamins (vitamins B and C). Vitamins cannot be produced by our body hence they must be taken in the diet daily. Some amount of fat is required for absorption of fat soluble vitamins.

Extend Your Horizon

- Change a plain aloo tikki into a nutritious tikki.
- Plan a breakfast meal that includes carbohydrate, protein, fat, any one vitamin and one mineral.

Maximize your marks

- Read the case studies carefully and perform activities suggested in the lesson. It will help in a better understanding of the topic.
- Read the functions and sources of nutrients.
- Read the deficiency diseases.

What's Important to Know?

Food and its importance

For healthy living!

- Food gives us energy to work.
- Food helps in the growth and repair of tissues.
- Food gives strength to fight against diseases.
- Food helps the body to function normally.
- Food satisfies hunger.
- Food has always been a central part of our social existence. It helps to relax and create a friendly mood. People take special care in planning and cooking food for social occasions.
- Food satisfies our emotional needs. These include a sense of security, love and attention. Familiar food items make us feel secure.

Evaluate Yourself

1. Anushri does not like to have green leafy vegetables. List down three reasons why green leafy vegetables are considered good for health and why she must include them in her diet?
2. Your grandmother often suffers from fractures. Which nutrient do you think she is lacking in? Suggest what foods she should have to avoid such situation further?