



## UNIT V FOOD AND ITS RELATION TO HEALTH

### NOTES

Food nourishes the body. Food provides nutrients. Nutrients are constituents in foods that provide-

- Energy for activity, growth and all the functions of the body such as breathing, digesting food and keeping warm.
- Materials for the growth and repair of tissues and keeping immune system healthy.

There are many different essential nutrients such as carbohydrates, fats, proteins, vitamins, minerals and water. A good balance diet of fresh food helps to keep us healthy.

Good nutrition is an important part of leading a healthy life. Living a healthy life style can help chronic diseases and long term illnesses.

The food which we use daily includes rice, wheat, dal, vegetables, fruits, milk, eggs, fish, meat, butter, oils etc. The nutrients found in foods are – protein, carbohydrates, fats, minerals, vitamin and water.

### PROTEIN

- **Composition of protein:** Carbon, hydrogen, oxygen and nitrogen.
- **Sources:** Animal proteins are obtained from meats of all kinds, egg, fish and milk products.  
Vegetable proteins are obtained from pulses, grams, seeds, nuts, cereals and vegetables.
- The simplest form of protein is **amino acid**.
- **Function of protein:** Promotion of growth, repair of wear and tear of tissues, production of metabolic and digestive enzymes and production of hormones, production of antibodies i.e. building up the body defenses against infection.

### CARBOHYDRATES

- **Composition of carbohydrate:** Carbon, hydrogen and oxygen.
- **Sources:** Cereals are the most important sources of carbohydrates. Roots and tubers, pulses and fruits are moderate sources of carbohydrates.
- **The main function of carbohydrate** is to give energy. When consumed in excess, they may be converted into fat and stored in the body.



## FATS AND OILS

- **Chemical composition:** Fats are composed of carbon, hydrogen and oxygen.
- **Sources:** Fats are obtained from vegetable oils, oilseeds, nuts, milk, ghee and fatty meat.
- **Function:** It serves as a source of energy along with carbohydrates and is stored in the body beneath the skin.

## MINERALS

- **Sources of calcium:** Milk, cheese, egg yolk, fish etc.
- **The daily requirement of calcium** is 1 to 1.5gms for children, 0.7 to 1gm for adults' and 1.5 to 2 gm for pregnant and lactating women.
- **Sources of phosphorus:** Spinach and similar green vegetables, wheat, milk and milk products, fish, egg yolk, seeds, fruits, carrot, cauliflower, cucumber etc.
- **The daily requirement of phosphorus** is 1.5 gms for pregnant and lactating women.
- **Sources of iron:** Liver, kidney, and egg yolk, all types of green leafy vegetables, dry fruits, whole wheat etc.
- **The daily requirement of iron** is 1.5mg for adults and more in case of women.
- **Sources of iodine:** Sea fish, oysters etc.
- **0.15mg of iodine** is needed daily.

## VITAMINS

- **Fat soluble vitamins** are soluble in fats and fat solvents. They are Vitamin A, D, E and K.
- **Water soluble vitamins** are soluble in water. They are Vitamin B complex and Vitamin C or ascorbic acid.
- **Sources of vitamin A:** Milk and milk products, egg, coloured fruits and vegetables like carrot, ripe mangoes, papayas and tomatoes etc.
- **The daily requirement of Vitamin A** is 3,000-4000 I.U. for adults and children and much more for pregnant and lactating mother.
- **Sources of vitamin D:** Milk products, fish, fish liver oil and egg, ultra-violet ray helps in the formation of vitamin D in the body.
- **400 International Unit (I.U.)** are recommended for infants and children.
- **Sources of vitamin E:** Wheat germ, wheat germ oil, cotton seed oil, rice germ oils, nuts, leafy vegetables and egg yolk.
- **The requirement of vitamin E** is yet to be discovered.



- **Sources of vitamin K:** Cauliflower, cabbage, spinach and other vegetables.
- In the absence of liver disease, there is no need to supplement the diet with vitamin K.

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