

B.SC AG. IVth SEMESTER

COURSE – PRINCIPLES OF FOOD SCIENCE AND NUTRITION

TOPIC – MALNUTRITION

BY-

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MALNUTRITION –

If the food consumed by an organism does not meet the necessary requirements of the body then the condition is called mal nourishment; and person suffering from it are said to be mal nourished.

Malnutrition means disordered nutrition, which may be due to excessive nutrition i.e., over nutrition or deficient nutrition i.e., under nutrition. Dietary deficiency may be both qualitative and quantitative.

MALNUTRITION



Malnutrition can also be defined as a pathological state resulting from a relative or absolute deficiency or excess of one or more essential nutrients which can be caused due to over nutrition or under nutrition or imbalance.

Under Nutrition ----

Under nutrition is the condition of Malnutrition which occurs when the nutrients of the diet are not able to fulfil the requirements of the body, i.e., when food is not according to the age, sex and occupation and there is a deficiency of one or more nutrients in the food. There are two conditions of under nutrition:

1. Quantitative dietary deficiency
2. Qualitative dietary deficiency.

In India the poor population do not have a normal, adequate and optimum diet due to deficiency of proteins, minerals, and vitamins. Even energy giving foods which are quite cheap are not present in their diet. Not only poor people even high class and medium class people have their diet deficient of these nutrients.

In India significant number of people are undernourished. Among them the number of the children of age group 1 – 5 year is greater than adults, as children of this age group require more nutritious diet.

Children generally suffer with deficiencies of proteins, calories, iron and vitamin and are called Protein Calorie Malnourishment (PCM). In PCM generally deficiency diseases are seen:

(1) Kwashiorkor

(2) Marasmus.

Under nutrition is seen even during old age. People doing laborious work do not even take even the needful quantity of calories. Along with the deficiency of calories, proteins, Vitamin A, B complex, C, iron salts or calcium deficiencies are also found.

Condition of women in India is even more miserable. Mostly women suffer with deficiency of iron, protein and calcium.

OVER NUTRITION—

When a person takes in food more than his requirement it leads to deposition of fat below the skin in the adipose tissue leading to obesity. Over consumption of calories or vitamins and minerals can result in over nutrition. Toxicosis is a form of over nutrition which is related to over consumption of vitamins and minerals.

In our country on one hand poor people suffer from under nutrition and on the other hand the rich people due to excessive over eating suffer from over nutrition and obesity. Excessive eating or fat rich diet containing ghee, oil, butter, cream, egg dry fruits, sweets and starchy fruits cause obesity. The people of this class are generally indulged in mental work and not physical work due to which their calories are not burned but stored.

This obesity causes many problems like coronary and heart diseases, kidney problems, stones in gall bladders, arthritis etc.

CAUSES OF MALNUTRITION AND UNDER NUTRITION IN INDIA—

In comparison to other countries people in India suffer more due to Malnutrition. Due to the mal nourishment the death rate in India is quite high. People of India are lean, thin weak and suffer generally with one disease or the other. This condition in India is caused due to following factors:

(1) DEFICIENCY OF NUTRIENTS:

India is an agricultural country but still the production in India is unable to fulfil the requirements of the people because in India the balance between agricultural production and utilization is not achieved due to population explosion as a result of which no balance is achieved between production and consumption of food. Although dairy farms and poultry farms have been opened yet milk and protein rich food is out of reach of poor people. Even the seasonal fruits and vegetables due to high price rise are unable to reach the common man. Even transportation leads to deteriorating the crisis further.

Thus this factor leads to malnourishment.

(2) POVERTY:

India is a developing country. Significant population of every city is that of the poor people. Who are unable to fulfil their requirements of bare necessities like food, clothing and shelter, i.e., they neither get proper food, nor have proper clothes to wear and are generally found staying on roadsides. For such people to get a nutritious diet is like expecting something impossible.

(3) ILLITERACY AND IGNORANCE:

Illiteracy and ignorance also causes mal nourishment. Ignorance relating to nutritional status in people is commonly seen. More over people do not pay attention towards improvement of nutritional status. In some families fried potatoes are consumed along with other fat producing substances while milk, fruits etc. are given no importance. Deep frying of vegetables, throwing off water of vegetables and starch of rice show ignorance of people. Due to ignorance, such food consumed by people loses its nutritional value, thus although people are well-fed yet they are malnourished as their requirements are not fulfilled.

(4) ADULTERATION:

Adulteration of food is very common these days. For example vanaspati ghee contains animal fat; rape seed are used to adulterate mustard oil, adulterating milk with water is a common phenomenon. Thus, people who consume it do not get proper nourishment and remain mal nourished.

(5) FOOD HABITS:

In India malnourishment is also caused due to the food habits of the people. Indians generally prefer only oily or fried, spicy food thus their food lacks necessary nutrients and variety so people here suffer from mal nourishment.

COMPARISON BETWEEN GOOD NUTRITION AND MALNUTRITION

S.NO	GOOD NUTRITION	MALNUTRITION
<u>1</u>	The body's size, weight, length are proportionate and according to the age of person.	Person is overweight or underweight and has retarded growth.
<u>2</u>	Body has a proper posture with straight limbs, broad and extended chest.	Body has a distorted posture with bent or curved shape.
<u>3</u>	Healthy and strong muscles and a uniform layer of fat stored in a adipose tissue	Weak and unhealthy muscles with either inadequate or excessive layer of fat below the skin.
<u>4</u>	Skin has a shiny glow indicating healthy skin and the mucous membrane has a pink colour exhibiting the healthy nature of person.	Wrinkled skin with a yellowish tinge indicating unhealthy skin and even the mucous membrane turns yellow from pink.
<u>5</u>	Strong healthy jaw and teeth	Weak jaw and teeth
<u>6</u>	Glossy, straight hair	Dry hair which lose their shine and glow
<u>7</u>	Healthy and shiny eyes, not very sensitive to light	Dull eyes, sensitive to light with irritation and black spot below the eyes indicating ill health of a person
<u>8</u>	Proper appetite and digestive system in proper working order.	Person loses appetite and generally suffers from indigestion
<u>9</u>	Person is energetic and quite active	Person feels tired, weak and inactive
<u>10</u>	Proper immunity in the body	Body loses immunity and person becomes susceptible to diseases
<u>11</u>	Person has a great power of concentration	Person is unable to concentrate and remains distracted
<u>12</u>	Person remains happy, cheerful and is always concerned about other	Person becomes tensed, afraid, irritated, tired, unhappy, and gloomy

Source :::

BASICS OF FOOD TECHNOLOGY AND NUTRITION BY SURYA NARAYAN AND SHEETLA PRASAD VERMA

BASICS OF FOOD AND NUTRITION BY MRS NEETA BAIJAL AND DR (MRS.) LALITA SHARMA