



SNS COLLEGE OF TECHNOLOGY



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COIMBATORE-641 035, TAMIL NADU

19FTO302 - FOOD NUTRITION

UNIT I -INTRODUCTION TO NUTRITION SCIENCE

TOPIC 5 & 6

Physiological Function of Food

The physiological functions of food can be further sub divided as follows: Energy giving, Body building, Regulatory and protective functions of food.

Energy Giving

The body needs a constant supply of energy to carry out the involuntary processes of which we are not even aware, like, respiration, circulation of blood etc. which are essential for continuance of life. Energy is also required to carry out voluntary activities like professional, household and recreational activities, which every human being indulges in like, jumping, walking, and playing etc. Besides this, some amount of energy is also required to convert the ingested food into usable nutrients in the body and the heat released during this process helps to keep the body warm. Energy is mainly provided to our body through carbohydrates and fats in the food. Rich sources of carbohydrates are cereals, sugar, jaggery, potatoes, honey etc. Good sources of fats include ghee, oil, nuts etc. A major part of our daily diet is constituted by these energy-rich food materials.

Bodybuilding

The foods we eat become a part of us. Thus one of the most important functions of food is that of building the body. A newborn baby weighing about 3-3.5 kg can grow to its potential adult size of 55-70 kg, if right kind and amount of foods are consumed from birth to adulthood. In adult life, the food eaten each day helps to maintain the structure of the adult body, and to replace worn out cells of the body. Building of new tissues is very important particularly for the growing children and pregnant women. There is also a continuous breakdown of old tissues and building up of new tissues going on in our body at all ages irrespective of the apparent growth, thus maintaining a need for body building nutrients. For the body building purposes, the major nutrients utilized are proteins and minerals. Proteins are mainly provided through milk and milk products, meat, fish, poultry, nuts, soyabean, pulses etc.

Regulatory and Protective Function

Food helps to regulate the activities of the body. It includes regulation of such varied activities as beating of heart, maintenance of body temperature, muscle contraction, control of water

balance, clotting of blood, removal of waste products from the body etc. For any of these processes, one or the other nutrients is responsible. For example, B group vitamins are an integral part of the enzymes that are responsible for metabolizing food and thus release energy. Vitamin K is an essential factor in clotting of blood. Apart from regulating our body processes, food also protects us from various infections, diseases, and injuries. For example, consumption of vitamin A and vitamin C rich food help in building resistance in the body to fight against invading organism. The main nutrients which perform these functions include proteins, vitamins, minerals, water and roughage. Although some of these nutrients are required by the body in very small amounts, yet its very important for them to be present in our daily diets. The major sources of these protective and regulatory nutrients are green leafy vegetables, milk, fresh fruits and vegetables, fish etc.

Psychological Function of Food

The second major function of food is the psychological function. Food must also satisfy certain emotional needs. These include sense of security, love and attention. Everyone grows in a particular culture with its own unique food habits of that culture and region. The person begins to associate the food habits and foods commonly consumed by him, as it gives him a sense of security and satiety. The foods daily eaten by us, gives us more mental satisfaction, even a nutritionally balanced meal may not be satisfying to the individual, if it is unfamiliar or distasteful to him/her. In a friendly gathering, one may try unfamiliar foods and thus enlarge our food experiences. During the course of time and repeated experience, strange foods become familiar and new tastes are formed. These new taste that are developed should again be satisfying to the mind. For example, a person accustomed to traditional Indian cuisine, takes time to adjust to Chinese or western dishes, but feels mentally satisfied at the sight of familiar foods.

Social Function of Food

Food and eating has significant social meaning. Sharing food with any person implies social acceptance. When you share a meal with anyone else, you are expressing your acceptance of friendship and respect for that person. Earlier only persons enjoying equal status in society used to eat together. A person would never share a meal with someone inferior to him in social terms. Food is also a symbol of our social life. Food is a medium through which we express our happiness. For example, feasts are given at specific states of life, such as birth, mundan ceremony, birthday, marriage etc. Sweets are also distributed and exchanged to mark certain auspicious occasion like festivals. Food is the common link in a meeting, party or get-to-gather that attracts people to come to such social gatherings. Refreshment served even at official meetings creates a relaxed atmosphere, where people can exchange their views. The menu for such get-to-gather should bring the people together, rather than divide them. Foods help to strengthen mutual friendship. Inviting friends and relatives over meals signify acquaintance and hospitality. Food also has a

specific significance and meaning in the religious context. Certain food items such as fruits, sweets and coconut are offered to the deity in temples. Often foods are prepared at temples and gurudwaras and distributed to devotees as a benediction or prasad. Further people of a given religious community share a common eating pattern. This is because religious texts and practices strongly recommend some foods while rejecting others. Food thus becomes an integral part of the social and religious life of people. Thus it can be concluded that food performs various important functions from satisfying hunger to building mutual understanding and above all helps to maintain our health and adequate nutritional status.