

agMOOCs

Relation between Food, Nutrition and Health-1

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Hello. Today we are going to start the course on nutrition therapeutic and health. Before that, we have to know what is the relationship between nutrition, health, and food. So let us start with the first class on relationship between food, health and nutrition.

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Introduction

- Food has been a basic part of our existence. By knowing the food composition, the nutritional content of food is known.
- Intake of food ensures growth in children and youth, maintains good health throughout life, meets special needs of pregnancy and lactation and for recovery from illness.

So, food has been the basic part of our existence. So by knowing the food composition the nutritional composition of food also is very clear. And intake of food ensures proper growth in children and youth and for the maintenance of health in old group and maintenance of good health throughout life of an individual. And it also helps in meeting the special needs during pregnancy, lactation and also for the recovery from ill health.

A large part of our food heritage is scientifically beneficial and the needs are to be retained and some aspects of the food may be modified in order to view the changes in the life of an individual. So most of the articles -- today we see in newspapers are given on different aspects of food. Some of them may be correct and but most of them may not be correct. therefore this course will help us to have a proper information on food and the knowledge that is gained to be spread to people around and so that the false ideas regarding for which interfere with the food selection are to be erased and people have a very good idea about the selection of food and maintain health.

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Definitions

- Food – is one that nourishes the body.
- Food may also be defined as any substance eaten or drunk which meets the needs for energy, body building, regulation and protection of the body.
- Food is the material from which our bodies are made.
- Eating right kind of food in right amounts ensures good nutrition and health.

So let us see some of the definitions that go into the food nutrition and health. Let us know what is food? It is the one which nourishes our body. We are what we eat. So it can also be defined as any substance that is eaten or drunk and which meets the people's need for energy bodybuilding and protection of the body. Food is the material from which our bodies are made. So eating the right kind of food in right amount ensures good nutrition and health. (Refer Slide Time: 02:32)

- **Nutrition - is food at work in the body. It includes everything that happens from eating food to its usage in various functions of body.**

Nutrients are components of foods needed for body in adequate amounts for proper growth, reproduction and leading normal life.

The science of nutrition deals with what nutrients we need, in what quantity, how to get them and how the body utilizes them.

Now nutrition, after we know what is food we should know what is nutrition. So nutrition is the food at work in the body, so it includes everything that happens from eating food to its usage in various functions of the body. Now nutrients are the components that are needed for

the body in adequate amounts which are required for proper growth, reproduction and also leading normal life. Now the science of nutrition deals with the various nutrients that are present in the food, the amounts we need in the proportion and how these nutrients are got into the body and how the body utilizes them.

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- **Adequate, optimum and good nutrition – indicates the right amount and proportion of nutrients for proper utilization for achieving highest level of physical and mental health.**
- **Nutritional status – state of the body as a result of foods consumed and their utilization by the body. Nutritional status can be good, fair and poor.**

Now adequate optimum and good nutrition are the indications of right amount and proportion of nutrients for proper utilization of these nutrients to achieve highest quality of health both physically and mentally. Now nutritional status; so this depends upon what food we eat and what nutrients are utilized in the body. So this nutritional status is the state of body as a result of the foods that are consumed and their utilization in the body for proper health. So this nutritional status can be good, fair or poor depending upon what we eat.

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- Good nutritional status – characterized by an alert, good natured personality, a well developed body with normal weight for height, well developed and firm muscles, healthy skin, reddish pink colored eyelids and membranes of mouth, good layer of subcutaneous fat, clear eyes, smooth and glossy hair, good appetite and excellent general health which is recognized by stamina to work, regular meal time, sound sleep, normal elimination and resistance to disease.

Now what is good nutritional status? So it is characterized by an alert, good natured personality, a well-developed body with normal weight for height and well-developed and firm muscles, healthy skin, then reddish pink colored eyelids, membranes of the mouth, the mucous membrane of the mouth also should pink in color and a good layer of subcutaneous fat. Subcutaneous fat is the fat which lies just under the skin. Clear eye, then smooth and glossy hair, good appetite, the person should be able to eat, then excellent general health which is recognized by stamina to work, regular meal time, sound sleep, normal elimination and greatly resistance to disease.

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- Health – as defined by WHO is the ‘state of complete physical, mental and social well being and not mere absence of disease or infirmity’.
- Malnutrition – undesirable kind of nutrition leading to ill health. It results from lack, excess or imbalance of nutrients in the diet. It includes both under and over nutrition. Under nutrition is a state of insufficient supply of essential nutrients.

Now WHO has defined health as a state of complete physical, mental and social well-being of an individual, all of us think health is only being free from illness. It is not so. A person should be healthy both on in terms of physical, mental and social well-being and not a mere absence of any disease. So that is a good nutritional status. Now malnutrition is an undesirable kind of nutrition leading to health. It results from lack or excess or imbalance of nutrients in the diet. And so it can include both under nutrition or over nutrition both are called as malnutrition. So under nutrition is a state of insufficient supply of essential nutrients.

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- Malnutrition can be primarily due to insufficient supply of one or more essential nutrients or it can be secondary, which means it results from an error in metabolism, interaction between nutrients or nutrients and drugs used for treatment.
- Over nutrition refers to an excessive intake of one or more nutrients which creates a stress on bodily functions.

Malnutrition can be primarily due to insufficient supply of one or more essential nutrients or it can be a secondary one, which means it results from an error in metabolism or interaction between nutrients to nutrients or nutrients and drugs that are used for treatment. So, it can be an insufficient of essential nutrients or which is called as a primary malnutrition. And if it is a secondary malediction it is the symptoms occur because of errors in metabolism or the interaction between nutrient and nutrient and also interaction between nutrient and drugs which cause malnutrition. On the other hand over-nutrition refers to an excessive intake of one or more nutrient and this causes stress on the bodily functions, so both are not healthy.

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- Diet – refers to what ever is eaten or drunk each day. It includes normal diet that is consumed either individually or in groups. Diets may be modified for making it suitable for sick individuals as a part of treatment – therapeutic diets

So for all these conditions we require a proper diet. Now what is a proper diet it refers to whatever is eaten or drunk each day includes normal diet that is consumed by an individual or a group. So these always the normal diet can be modified into a diet which is suitable for an individual of different age groups, of different health status or physiological status. So when we modify the normal diet for our illness state it is called as a therapeutic diet.

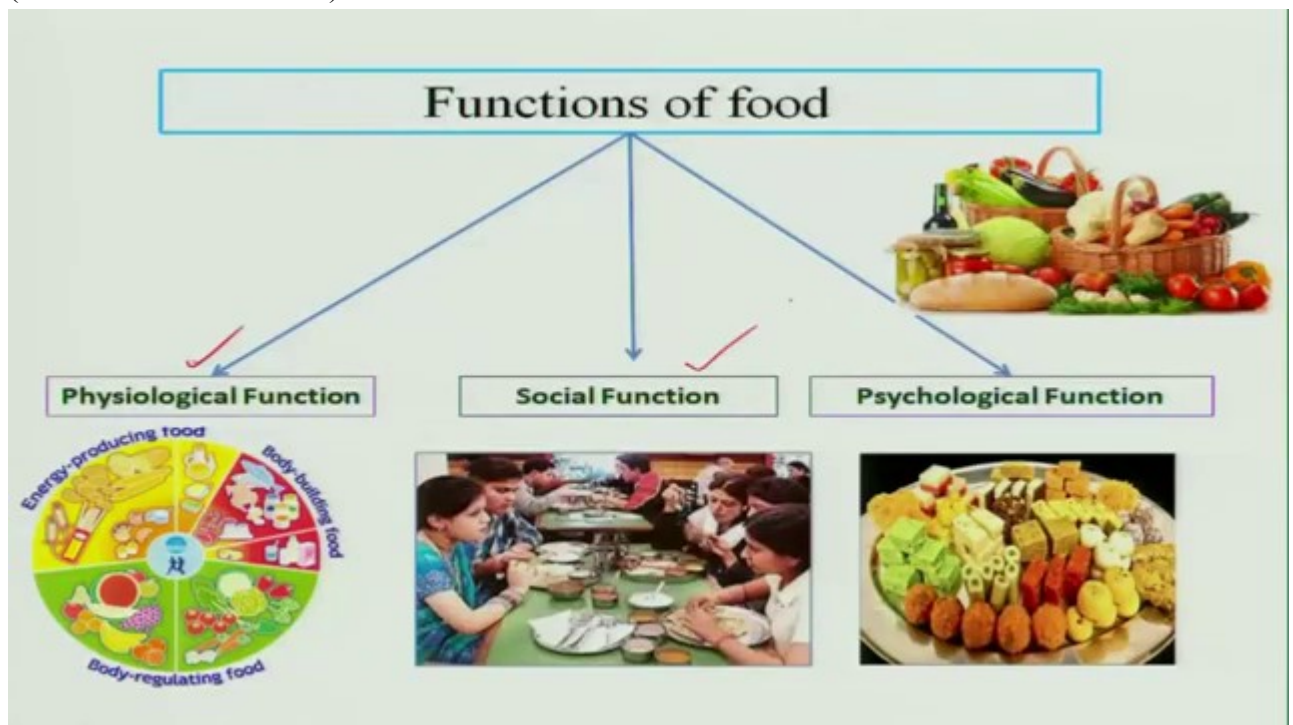
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- Nutritional care – using knowledge of nutrition for meal planning and preparation to make it in an attractive and acceptable form. In this the existing meals can be modified to improve in terms of nutrition, and acceptability. Diet can be planned for individuals or a group to suit their requirements like health status, nutritional status, place of living, climate etc.,

Nutritional care is using the knowledge of nutrition for meal planning and preparation to make an attractive and acceptable meal for the whole family. So in this the existing meals can be modified to improve in terms of nutrition and acceptability. It is not that if you make a

nutritious meal and the whole family does not consume then we cannot say it is nutritional care. So the whole family should consume therefore it should be nutritious at the same time acceptable. And that can be planned for individuals or group to suit their requirements of health status, nutritional status, it is also the place of living because if we give some odd diet to an individual he will not consume. So the local diet which is followed should be given and at the same time it should also be suitable for the climate. So such thing is called as a nutritional care. So after knowing all the definitions with regard to food, nutrition and health let us know what are the functions of food, foods also have certain functions in the body to carry out.

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So we have main three functions; one is physiological functions, social function and psychological functions. Do you all agree with me that food has these three functions? Physiologically means it should give us energy. It should give us a stuff to bodybuilding and also protect us from different illness. Whereas are social functions when we get together we have food. When we love somebody we give food. And physiological and psychological functions also if you go to a new place and consume some new food you don't like, isn't it, but repeatedly when you consume the same food then you are satisfied with the food. That is psychological.

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Physiological functions of food

- First function of food is to provide energy. Body needs energy to sustain involuntary processes essential for continuing life. It is also required for various activities like professional, household and recreational activities, convert foods into utilizable nutrients required for growth and warmth.
- Another important function is body building. An infant at birth weighs 2.5-3.0 kgs and grows to 50-60 kgs during adulthood, which is possible only if right food in right amount is given from birth to adulthood. Food eaten also help to maintain the structure of the body and helps in repair of worn out tissues

Now let us see if what is the physiological function of food, first function, main function of food is to provide energy to the body. So body needs energy to work, to sustain all the involuntary processes without knowing our body carries or so many functions like the heart keeps on beating, we keep on respiring without our knowledge, our brain functions, our liver functions, so much of metabolism goes on. So for all these energy is required which is through the food. And it is also required for various activities either it is it can be professional, household, recreational activities or even convert foods into nutrients in the body which is metabolism also requires their various nutrients. So these are the physiological functions.

The other function is bodybuilding. So when we see an infant, you see how small it is. If you observe the weight of the infant it is only 2.5 to 3 kg when it is born. But when it grows to an adult the weight increases to 50 to 60 kgs. Imagine the amount of growth that is taking place. So this function is carried out by the protein that is present in the food which carries on the bodybuilding function. So it keeps on building up the tissues to increase the weight of the body. So all this is possible only if right food in right amount is taken from birth to any stage in the life. Now food eaten helps to maintain the structure of the body. This structure is given by the food that is present and the nutrient that is present required for bodybuilding. And when we grow to an adulthood we need not grow in our height or weight in extra amount, but in such conditions the food is required for repairing the worn-out tissues.

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- Food regulates the activities of the body including – heart beat, maintaining body temperature, muscle contraction, water balance, blood clotting and removal of waste products from the body.
- Food helps in improving the immune system and improves resistance power of the body.

Then food regulates the activities in the body including the heartbeat, maintaining the body temperature, muscle contractions, your balance of the body, blood clotting and removal of the waste from the body, all these are very important. Now food also helps in improving the immune system. This immune system helps in providing a lot of resistance to our body, therefore protects our body from illness.

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Social functions of food

- Food has always been the central part of our existence, social cultural and religious life
- Special foods are distributed during religious functions in homes, temples, churches etc.
- Feasts are given in different stages of life like birth, cradle ceremony, birthdays, marriages etc. many feasts call for feeding specific segment of people.

Now the social function of food is food has always been a central part of focus in our existence. Any cultural or religious life food is the central part. Now special foods are distributed whenever you are happy you try to distribute foods like in religious functions, in

home, temple or any church et cetera, the happiness you try to express is through distributing food. Then feasts are given a different stage when the child is born, when there is a marriage and when you seek a job or when you get a job then birthdays et cetera where specific segments of people are given and you try to cater to the food needs of all the segments of people. Then certain menus are associated with specific foods in the region like we have the mediterranean food, then you have the Punjabi food, you have the North Indian, South India and so on.

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- **Certain menus are associated with specific foods in each region.**
- **Food has been used as expression of love friendship and social acceptance**
- **Food is also used to express happiness like success in exams, job, marriages, birth of a baby etc.**
- **Food for get togethers, meetings or functions should be planned in a proper manner to bring people together.**

Certain menus are associated with certain regions of the certain regions. Then food has been used as an expression of love friendship and social acceptance. Whenever you have a friend whom you love too much you try to remember what different likes and prepare that same menu so that the friend is so happy to eat it. Then food is also used to express happiness like in success in exams, job, marriages, birth of a baby et cetera. Now food for to get-togethers, meetings, functions should be always planned in a proper manner to bring people together. You cannot provide food that you like in a social gathering. We always think of the others and plant food so that everybody will enjoy the food that is the social function of food.

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Psychological functions of food

- In addition to physical and social needs, food must satisfy certain emotional needs.
- It includes a sense of security, love and attention.
- Familiar foods usually make us feel secure.

Now third important function is the psychological function. So in addition to the physical and social needs you must satisfy certain emotional needs. So this when you have go to certain place and eat certain foods you have a sense of security. You get food. Suppose you are a South Indian and come to North India get idli or Dosa. You feel so secured about it. Or a North Indian comes and has some food of their region then they feel satisfied. So it gives a sense of security, love and attention.

Now familiar foods, whenever we have some familiar force we feel secure. And sharing of food is a token of friendship and acceptance. So whenever we meet people the food becomes the main part of our gathering. Then in a friendly gathering we try unfamiliar foods when we go out in a group we try to find out some unfamiliar foods and try to eat it. And improve our --I mean now increase our food experience, the taste to the food. So anticipating needs and fulfilling the expressions of love and attention is through food. Now these sentiments are on the basis of normal attachment the mother's cooking.

So when you eat somewhere and something is very tasty you always remember your mother's cooking, isn't it? That is the attachment you have to food. You don't like food that is cooked by anybody and everybody. So mother's food is always the best. That type of attachment you should get through food. So this is the first part of our class where we have seen the definition of different terms like food, nutrition, health, nutritional care, nutritional status, malnutrition where you have seen what is over nutrition, what is under nutrition then what are the various functions of foods? Which are the physiological function, the social function and the psychological function? Thank you. Let us meet in the next class. Good bye.