

UNIT II - FOOD AND NUTRITION

9. MEAL PLANNING

In previous class you have read that human eat food not just to quench hunger but also for keeping body healthy, to provide energy, to maintain her work capacity, physical growth and to move body in proper way. This work could be done in proper way only when all nutrients are present according to our physical state and work capacity. All individual have different age, sex, stage and work capacity in a family, hence there nutrient requirement is also different. Meal planning is important in order to fulfill nutrient needs of all family member.

Meal planning is art as well as science to prepare food in different ways and presented in attractive way, with aroma and taste increases the hunger pangs and palatability. While on other hand inclusion of all food groups according to the requirement of the family members is a mental process. Meal planning is not mere the planning list on paper, it also includes purchase, cooking, storage and serving. Meal planning is to provide food according to nutrient requirement of family member.

In other words inclusion of nutrients rich food according to the requirement of each family member is known as meal planning, means each member in the family should get balanced diet is meal planning.

Importance of meal planning : Planning a successful diet is very important with some vision, it does supply well to the nutritional needs of all the members of the family, as well as, according to their interest. Apart from making food differently, it is also a means of providing nutritious food at a low cost. House wife can save his time, money and energy through meal planning. Preplanning i.e. before 3-4

days makes easily to know which food item has to be purchased and which is already present in kitchen. It also helps in storage of food, food available according to season and food obtained from home itself. It also helps in utilizing left over foods. In brief meal planning is to provide food which is nutritious, tasty, according to interest in aroma, colour and taste is incorporated.

Need for meal planning : In a family, there are individual with different age, sex and work capacity. For example infants, school going children, college going adolescent, male working in office and female working in house and office and old age male and female. There nutrient requirement is different according to their physical and work state capacity. If in a family, individual who is hard worker i. e. working in farm, laborers, require food which provide more energy (like cereals oil seeds gur etc.). Individuals with sedentary workers for example office worker and college going or who are involved in mental work require less energy. These individuals have more stressful life hence, they require more fruits and vegetable. Growing children, adolescent, pregnant and lactating woman require energy, protein, vitamins and mineral rich food. Old age people require less energy and more vitamins & mineral rich food because their physical activity is very less. Meal planning is also affected by like, dislike, climate, availability of food, time, energy and cost of food stuffs. For example children relish sweet in contrast to adolescent which like spicy foods, according to climate we like cold in summers while hot and spicy in winters. Fruits are also liked in season as they are tasty and cheaper in season.

Principle of meal planning :

1. **Nutritional requirement :** Most important point is to take care of nutritional requirement of all family members. Individuals require nutrients according to their age, sex, physical state and work. House wife should choose different nutrients from food groups so that balanced diet is provided to whole family.

It is very difficult to prepare, different food to each members of family. Using food groups by adding or reducing some nutrients in one food can prepare balance diet for each member of the family for i.e. for children can be given milk, curd, butter milk, ghee custard, paneer, cheese instead of milk only to fulfill their nutritional requirement. Adolescent like spicy foods hence stuffed paranthas can be given inspite of plain dal and vegetable.

2. **Variety :** There should be variety in food interms of colour, aromo, texture and shape. Consumption of one type of food daily reduces interest in food and this type of food does not provide satisfaction. Variety can be brought in many ways :
 - Choose food items from each food group for eg for making chapaties wheat flour can be replaced with corn, barley, bajra or mix atta.
 - We can add variety in food by using different cooking methods for example : boling, frying and roasting.
 - Variety can be added by changing consistency of food for example : liquid, semi-solid and solid.
 - Food variety can be created by altering shape and size of food items for example by cutting, different colour of fruit and vegetables into various shape and sizes.
3. **Satiety :** Meal should be planned in such a way that it gives satiety to our hunger. Food should contain protein, fat and roughages so that it gives satiety. Breakfast should be taken heavy so that hunger pangs cannot be experienced till lunch i.e. if we take bread or biscuit with tea in breakfast than we feel hungry very easily while if we take parantha with milk then satiety is maintained up to lunch.

4. **Meal time :** Meal should be planned in such a way that interval between the meals is also considered. Normally we take meal 2-4 times. Breakfast, midmeal, lunch and dinner. Laboures eat food only 2 times. Children take meal 5-6 times in a day because children cannot take much food at a time. This principle can also be taken care while planning meal.

5. **Consider whole day as one unit :** Meal should be planned from breakfast to dinner so that food item could be included in whole days meal for example cereals to be taken in whole day. In breakfast- bread, upma, poha. In lunch- chappati, puri, rice. In dinner inner-parantha, bati, halwa and kheer.

Considering whole day as unit to fulfill requirement of all nutrients required in a day by family member. Mental process of meal planning should be done once in a day to provide balanced diet to whole family.

6. **Time :** There is also one factor in meal planning that working women manage their daily work by doing pre-processing of food at night i.e. cutting vegetable, rolling dough for chappti and putting it into fridge. This saves time with planning meal together.
7. **Acceptability of food :** Acceptability of cooked and prepared food is also one of the principle of meal planning. If balanced, tasty and palatable food is not acceptable by the family than it is waste of time and energy.

Hence it is important to know likes and dislikes of family members while planning meal. Children do not like dal vegetables hence it should be rolled in dough to make parantha. Amount of food served at a time should be neither less nor more for eg one chappati and half bowl vegetable or four chappati and two bowl dal served in lunch is not acceptable. Food will not give satiety to your hunger if it is served very less while appropriate quantity of food reduce hunger hence amount of food should also be taken care during meal planning.

8. **Cooking method :** As we have read that meal planning is not mere the planning. It includes

purchase, storage, cooking and saving while meal planning on paper. Cooking methods should also be considered while plan meal. For eg we have planned to make rice in lunch, if we remove water from cooked rice, it will reduce nutrients from rice. In the same way removal of excess water from dal, vegetable or over cooking reduce the nutrients. There are many factors which affect meal planning. These are as follows :

Factors affecting meal planning :

1. **Age and physical status :** Age and physical state affect meal planning. Nutrient requirement is different in physical state and stage. For example requirement of nutrients increased in pregnancy and lactation. In the same way nutritional requirement of all nutrients increased in diseased person according to its disease condition. Growing children require more energy and protein as compared to adult and old.
2. **Sex :** Normal body built of man is varied as compared to female in their body composition. Man have muscular body and less deposition of fat and cholesterol. Hence they require more energy giving food like cereal, jaggery, sugar, fats & oil. In contrast females have more fat hence they should be given less fat and more protein rich foods.
3. **Climate and weather :** People living in colder region require more energy and protein as compared to hot region so that they can maintain their body temperature.
4. **Physical activity :** Requirement of nutrient change according to physical activity for eg laboures require more energy as compared to sedentary worker so that he can perform his activity properly.
5. **Income :** Major part of income in every family spend on food. Expenditure on food decrease as income increase. Its believed in today's scenario that people of high income groups expend more money on nutritious food if they using principles of meal planning. Balance food can be served to low income groups whose economic status is not good by following way :

- (i) Costly foods like milk, egg, meat, fish, paneer, almond, cashew can be replaced by dal and groundnut
- (ii) Seasonal fruits and vegetable should be chosen.
- (iii) Left over can be used by changing its form - left over dal can be used in making parantha, left over vegetable can be used to prepare pullav or khichdi.
- (iv) Nutritious food can be prepared by replacing combination of low cost food like - spinach, gramflour, potato and oil. Hence balanced diet can be prepared by using principle of meal planning.

6. **Availability of food stuffs :** Seasonal vegetables and fruits are easily available at low cost. It can be preserved if we want take use of off season fruits and vegetable. All food stuff are not available everywhere, example wheat is cheap in North India while rice in south. That's why meal should be planned according to availability.
7. **Likes and dislike of members :** Considering all the members living in the house, it is a difficult task to consume food items, but if the food is prepared in different ways, for eg bottle gourd is not liked by everyone but if koftas are made out of it then everyone can eat with interest. Many times we want our child drink milk but children do not drink milk. Parents should not forced children to drink milk. In place of milk custard, curd, cheese, ice cream, etc., ca be prepare which he likes very much. It is important factor in meal planning.
8. **Family customs, tradition and culture :** Each family has its own custom and tradition. Meal should not be planned other than their tradition. Suppose, a family has a tradition of 2 meal pattern than we cannot change it by 4 (breakfast, lunch, mid meal and dinner). Change should be made gradual. Meal planned in festivals, birthday, marriage are different from regular meal planning. Meal should be according to occasion like in holi and diwali, sweets should

be prepared. On makarsakranti gingelly seed should be used in food, sevia on eid and cake on christmas.

- 9. Working women :** It is always a pressure on working women that they do not plan balanced food for their family due to dual responsibility. Its not always true. They spare time to make preparation for next day either by taking ready to eat or ready to cook foods for eg ground spices, sauce, jam are used for making preserved vegetables and fruits. Reduces time and energy by using equipment for eg by cooking dal, rice and vegetable by using separate containers, by peeling peas, and other vegetables while watching TV. They can also plan meal for whole week so that they do not have to ponder daily.

Nutrition education : This is very important point because if she is not having general knowledge of food and nutrient thus she will not be able to plan meal.

On this basis of above principles and factors, meal planning will be practical and containing variety. Meal planning have many benefits.

Important Points :

1. Food available according to the nutrition requirements of the family.
2. Meal planning can prepare food nutritious, tasty, palatable and contain, different colour, aroma and taste.
3. Meal planning principle are- nutrient requirement of family, variety in food, satiety, time of meal, whole day as unit, acceptability of food, appropriate cooking method.
4. Meal planning is affected by age, physical activity, sex, climate, season, income, availability of food, like and dislike of family, traditions and customs working women and nutrition education.

5. Requirement of whole family can be nutritionally fulfilled through meal planning.

Questions :

1. Choose correct answers for the following questions :
 - (i) Meal planning is most important for :
 - (a) Pregnant
 - (b) Lactating
 - (c) Children
 - (d) All the groups
 - (ii) Most important person in meal planning is :
 - (a) Shop keeper
 - (b) Neighbor
 - (c) Infant
 - (d) House wife
 - (iii) Nutritional requirement of all family is :
 - (a) Similar
 - (b) Equal
 - (c) Different
 - (d) Extra
2. Fill in the blanks :
 - (i) diet can be prepared from low cost seasonal food.
 - (ii) Including different nutritional food according to the need of family is known as
 - (iii) Physical, mental state and age are the main which influences meal planning.
3. Factors affecting meal planning. Explain.
4. Explain any two principles of meal planning.
5. Write the importance of meal planning in following points
 - (a) Variety
 - (b) Nutritional education
 - (c) Working women
 - (d) Income of family.

Answers :

1. (i) d (ii) d (iii) c
2. (i) balanced diet (ii) meal planning (iii) factors