

CHAPTER-VI

UNIT

II

NUTRITION FOR SELF AND FAMILY

PLANNING MEALS FOR FAMILY

INTRODUCTION :

It is essential to have proper nutrition for good health for self and family. The food that we eat directly influences our nutrition of the body. Food and nutrition both are supplementary to each other. Therefore, as you have studied earlier it has become essentially important to study and acquire knowledge about nutrition for the better health of our family members. In this chapter certain subjects will be discussed in detail which have relation to our health. You will know the following while studying this chapter :-

- Meaning and importance of meal planning.
- Principles and factors affecting meal planning.
- Planning meals for the family.
- Planning meals for some special and diseased conditions.

6.1 Planning Meals for the family

All the members of our family must get balanced food to lead a healthy life.

In the same family, there may be members from various age, sex and activity. Some members might be teenaged, pregnant or lactating mothers, elderly and ailing persons. Moreover it is also seen that there is variation in food habits in different families and also among different members of a family. Meal planning for each member of a family will be fruitful, when all these aspects are considered, while planning a day's menu for the family.

6.1 (a) Meaning and Importance of Meal Planning : (Meal planning is an advance plan to provide the required amount of nutrition to the members of a family. This is a process of prior decision about what to eat in different meals of a day. This process is a combination of arts and science together.) This is an art on the part of the housewife to prepare tasty and attractive food by applying her own imagination and creativity in cooking foods. On the otherhand, cooking of food by selecting the right kind of food

items in a scientific way without losing the nutrients is science. For preparing a plan of balanced diet one must have the knowledge of sources of nutrients, requirements of nutrition of different individuals, seasonal availability of food items, food habits and financial capacity of the family. Briefly, meal planning is the mental preparedness or process of planning what kind of food would eat on a particular day. Hence meal planning is A well calculated plan, prepared in advance to provide daily meals in required amount. The nutrient requirement of each member of the family, their age, sex, profession and income of the family should always kept in mind while planning meals for a family.

It is not an easy task to provide balanced diet to each and every member of a family by considering their health and other requirements. The members of a family do not have same age, sex, physical activity, taste etc. Besides these, financial capacity, time, price and availability of food items also play a role. It is a difficult task to prepare food for different meals of a day by selecting food items from various food groups. The body has to derive the required nutrients from the food we eat in a day. Therefore, we must ensure that our meals should include the foods which contain all the necessary nutrients required for our body.

Moreover combination of food items, methods of preparation and ways of presentation etc. should be appealing and enjoyable. While planning meals, the taste and food habits of family members of different age group, variety in meals, selection of seasonal foods, adequate nutrition and the food budget of the family should be considered. Therefore, for providing food by considering all these factors, it is necessary to have a proper meal planning. It is also very essential to have adequate knowledge, practice and skill to prepare a day's menu from morning till night. The menu for a week with limited budget should be prepared by selecting necessary food items and by adopting appropriate cooking methods.

✓ The characteristics for planning an ideal menu are -

(1) Appropriate foods from different food groups containing nutrients required for our growth, nutrition, repairing and effective regulation of our body.

(2) Proper and scientifically correct cooking methods without loss of nutrients and acceptable to the family should be selected.

(3) Foods of each meal of the menu should be nutritious and balanced. One third of the daily required nutrients should be included in each meal of lunch and dinner and the remaining one third should be included in the breakfast and other snacks.

(4) Meals should be served timely and attractively. One can set example of economy of preparing and providing tasty and nutritious foods to the family members even by using left over foods of previous meals.

✓6.1 (b) Principles of Meal Planning :

It is necessary to have an ideal meal planning to keep the family members healthy and strong. Meal planning saves our time, labour and fuel. While planning meals many aspects are to be taken into consideration. Therefore some principles should be followed for a balanced, correct and scientific meal planning.

(1) There are members of various age groups in a family and the requirement of nutrients for them also varies. Moreover there may be difference in tastes, likings and non-likings of individual members. Similarly, there may be pregnant or lactating mother, patients having restrictions to some nutrients in a family. Therefore a well planned menu will be able to build a healthy family by fulfilling the nutrient and food requirement of each member of the family.

(2) While planning meals it should be seen that there is appropriate utility of time, labour, fuel and money. The meal planner should keep in mind about the selection of proper method of cooking, use of labour saving equipments and time

table etc.) The meal planning should have a relation with the financial status of the family. The food budget of a family may be restricted by using some locally available seasonal food items and low cost vegetables, fruits and combination of pulses and cereals to replace some costly foods like fish, meat, egg, butter etc.

(3) (It is to be seen that there is no wastage of food and nutrients. Rather, nutritive value of some foods can be enhanced by using special methods like sprouting and fermentation.) The leftover foods instead of wasting, may be recooked with fresh new taste and flavour. Moreover bulk purchase of food items saves money, time and energy.

(4) It should be kept in mind that foods must be nutritionally balanced for each member of the family. For this foods must be selected judiciously from various food groups for each meal of the day and should see that at least one food item from each food group is included in the menu.

(5) Meals should be planned by giving due importance to one's likes and dislikes, vegetarian or non-vegetarian and traditions and customs. Monotonous food preparation reduces appetite and develops dislikeness for food. Meals become more appealing if various food items are cooked and served with

attractive colour, flavour and texture.

(6) Advance planning is necessary for the sick members, pregnant or lactating mother in a family. Moreover proper importance should be given to a member having restriction on particular nutrient or food item while planning meals.

6.2 Factors Affecting Meal Planning

: Usually food requirement of any two members in a family is not similar. There may be difference in food requirements for each member to fulfil their physical, social and mental requirements. Moreover the factors like financial status, climate etc. have influence on meal planning. These factors are briefly discussed here.

(1) Size and Pattern of Family : The number of members and the pattern of a family play direct role in meal planning. Because the total number of family members decide the amount of food items required by them. The meal planning also depends on various types of members in a family like-infants, teenagers, pregnant, aged or ailing persons etc. Because in such situation, requirement of food and pattern of food preparation might vary.

(2) Age : Food requirement varies according to age. Meals in a family should be planned keeping the age of the members in mind. An infant or baby will

take only milk or semi-liquid food, while the teenagers would need some tasty and energy giving food. Similarly, aged members might have problems in chewing or digestion of food or some other physical complications. Therefore it should be ascertained that each member gets his food requirement based on his age.

(3) Sex : We all know that males have comparatively more weight, height, physical structure and activity and hence require more food. They need food of higher calorie. On the otherhand, teenaged girls and women need more calcium, iron, folic acid and some vitamins alongwith calorie. Therefore one should have a clear idea of sexwise requirement of food while planning meals.

(4) Occupation : Physical activity of a person differs according to one's occupation. Every member of a family does not have similar physical activity. Persons engaged in routine type of works have light exercise. But farmers, players, labourers and workers do heavy exercise and need high calorie food in higher amount.

(5) Religious, Social and Cultural Customs, Tastes and Food Habits : Families have various food habits based on their religions, social and cultural traditions. In the name of religious beliefs the Hindus avoid eating beef, Muslims

avoid pork, the Jains avoid non-vegetarian food. Similarly, onions and garlies are not used in some societies. The widows in some communities have restrictions in some foods. In this way, different customs and some variation in food habits are seen in different families and societies. Therefore, all these aspects should be considered while planning meals for a family. Food habits of all the members of a family are not similar, so importance should be given to the taste, likes and dislikes of each member.

(6) Economic Status : The economic status of a family has direct influence on the food. The use of costly food items like fish, meat, cheese, butter, dry fruits etc. are limited in a middle class family with limited income. But the variety and nutrition of meals can be maintained through various cheaper but nutritive foods. The members of the family must get their required nutrients through food. Therefore meals should be planned keeping in view the present market price of required food items. Knowledge of food and nutrition helps in planning balanced meals. Some cheaper and easily available nutritious foods like green vegetables, seasonal fruits, pulses, soyabean etc are rich in nutrients. So after knowing these points, low income families can also plan tasty nutritious and balanced diet.

(7) Weather, Season, Climate and Availability of Food Items : The seasonal foods should be included in the menu while planning meals. Now-a-days preserved food items of various seasons are available throughout the year. But in different seasons these are abundantly available as fresh, nutritious and at cheaper rate. The climate plays an important role in planning meals. Food habits of people differ depending on the climate of a place. Because of excessive heat during summer, appetite for food decreases. Hence some food items like cold drinks, juice, ice-cream, salads, curd and sour preparation should be included in the menu. Similarly during winter high calorie foods are required. So preparations like meat, egg, chop, cutlet, paratha, hot curry etc should be included. Therefore seasonal and easily available nutritious food items should be included in the menu.

6.3. Planning Meals For the Family : Planning meals for a family is a difficult task. Food requirement of different members of a family varies and some factors like individual preference, food habit, weather, financial capability etc are also to be looked into. In planning meals it should be kept in mind that each and every member of the family who may be a child or elder, male or female, boy or girl, healthy or ailing must be provided

with balanced food. Our body can have the required nutrients in required amount like protein, carbohydrate, fats, vitamins, minerals etc from balanced food only. Therefore, the characteristics of a good menu prepared for a family by keeping the aforesaid points in mind are - Suitable combination of foods, attractive food and full of colour, flavour and taste, besides being adequately nutritious and satisfying.

The number of meals the family members eat in a day should be considered while planning meals. The gap between meals, tiffins and meals of school going children, office goers, meals for members staying at home etc are to be kept in mind. Planning of menu on weekly basis will save time and energy and helps in selecting food items.

(a) Meal Planning for Children : Food plays important role in future physical and mental health of children. Lack of adequate knowledge about food and diet is the main cause of malnutrition in children as revealed from the research and survey conducted in various parts of the world. Good nutrition is needed in every stage of human life. However, the amount of nutrients vary with different stages of life. This amount is highest during childhood when growth and development becomes very rapid. A child gains his height and weight every year.

Therefore the additional nutrients required for this continuous growth must be provided through foods.

The childhood can be divided into several stages. The type and requirement of food also vary depending on these stages. During the period of first six months after birth, babies donot need any extra food, if they get sufficient amount of mother's milk. Mothers's milk provides all the required nutrients in abundance for body building and nutrition of the babies. But after six months solid food should be given in addition to mother's milk. Fruit-juice like orange, sweet lime etc, vegetable soup, well cooked dals, boiled and mashed potato, carrot etc. with little salt can be given to the babies. Cereal based foods like cooked rice powder, suji porridge etc is very useful for babies. Commercially prepared tinned foods also may be given. Solid food should be started from the mid day meal and should be extended slowly to other meal times of the day. Babies like the foods when prepared with different tasty items which also prevent them from the deficiency diseases. Meals for the babies may also be planned from the foods prepared for the other family members.

The foods of pre-school children should be sufficiently nutritious because

during this period, growth of the child takes place at a very rapid rate. The strength to fight against various infectious diseases is also required. There should be additional amount of Vitamin A, Vitamin C, calcium, calorie and protein in the diets of the children of this age group. They should be given at least 2-3 glasses of milk daily. The requirement of protein and calcium is met if pulses, meat, fish and at least four eggs per week is taken. Hot and spicy food should not be given upto 6 years of age.

The diet of school going children should provide sufficient amount of calorie, protein, calcium and vitamin A to them. As all of you know that school children need high calorie diet because they do lot of activities like playing, running, jumping etc. The requirement for the speedy growth of this age can be provided by two-third of energy and equal amount of protein required for an adult person. Milk, green leafy vegetables, yellow vegetables, citrus fruits should be incorporated in the menu. A school going child can eat the meals prepared for other members of the family. However such foods should be simple, tasty, attractive and nutritionally balanced. The breakfast should be heavy. The tiffin taken to school should be nutritious. The dinner should be enriched with nutrients

which might be deficient in the day's meals.

Few important points should always be kept in mind while planning meals for the adolescents. During this period there is significant changes in their physical, mental and emotional status. There is a spurt in growth and development. Enormous working efficiency and many other individual characteristics become noticeable in them. Adolescents are physically more active than adults and have a greater metabolic rate. So they feel hungry all the time. Comparatively adolescents need more food than the adults. Therefore they should get these increasing requirements of energy and nutrients through their foods. Body-building foods like fish, meat, milk, egg, fruits and vegetables including the energy giving foods should be given in plenty. Ghee, butter, cheese, roti, bread, pea, beans, cashewnut, etc, should also be given in sufficient amount. Light tiffins should be given to them in between three major meals of the day. In this age, adolescents are found to be attracted towards junk food or fast food. But these foods are usually fats, carbohydrate and sugar based and provide calories only. Interest for home made food is lost and slowly they start suffering from deficiency diseases. Therefore while

planning meals for the adolescents, it should be seen that it is prepared keeping their tastes and likings in mind. Meals should be prepared with nutritious foods of their likings and served attractively.

Some ideal menu for children of different age group is shown below.

Table - 1
A day's sample Menu for a pre-school Child

Meal	Foodstuff	Amount
Breakfast	Milk	1 glass
	Roti	2 (small)
	Boiled Egg	1
Tiffin	Bread Toast	4
	Banana	1
Lunch	Rice	1 bowl (medium)
	Dal	1 katori
	Fish Curry	1 katori
	Salad	1 plate (small)
	Curd	1 katori
Tea-Time	Milk	1 glass
	Suji Halwa	1 plate
Dinner	Khichri with vegetable (Beans, Carrots, Potatoes etc)	1 plate
	Fruit Custard	1 katori
	Milk	1 cup
Bed-Time	or	or
	Apple	1

Table - 2
A day's sample Menu for School-Going Child

Meal	Foodstuff	Amount
Breakfast	Milk	1 glass
	Bread-Toast	4 slices
	Boiled Poached Egg	1
	Banana	1
Tiffin (School)	Roti or Parathas	2
	Mixed vegetable	
	(Potatoes, Peas, Cauliflower)	-1 katori
	Pickle	
Lunch	Rice	2 bowls (medium)
	Dal	1 bowl
	Fish Curry	1 katori
	Salads	1 plate
	Curd	1 katori
Tea-Time	Milk	1 glass
	Spinach Pokoras	1 Plate
Dinner	Roti or Chapaties	2
	Rajmah Curry	1 bowl
	Beans & Potato vegetables	1 katori
	Custard or Raita	1 katori
Bed-Time	Milk	1 cup

Table - 3
A day's sample Menu for an Adolescent

Meal	Foodstuff	Amount
Breakfast	Milk	1 glass
	Stuffed Parathas	2
	Boiled Egg	1
Tiffin (school or college)	Sandwiss	4 slices
	Banana	1

Lunch	Chapaties	4
	Rajmah Curry	1 bowl
	Salads	1 plate
	Curd or Raita	1 katori
	Fruit (Mango, Orange, Sweet-time)	1
Tea-time	Milk	1 glass
	Suji Upma	1 plate
Dinner	Rice	1 plate
	Arhar Dal	1 bowl
	Meat or Fish Curry	1 bowl
	Mixed Vegetable (Potato, Carrot, Beans)	1 plate
	Kheer	1 katori
Bed-Time	Apple	1

(b) Meal Planning for Expecting Mother :

(The pregnancy period is a physically and mentally stressful period of a woman. A woman will be successful in delivering a healthy baby and breast feeding if she gets right kind of nutrition in required amount during this period.) It is important to know about the requirement of nutrients for such women before planning meals for them. The demand of almost all important nutrients like carbohydrate, protein, fats, vitamins, minerals increases

during pregnancy for the health, growth and development of both mother and the baby. If these additional requirements are not met through food, the woman may suffer from deficiency diseases like anaemia, goitre, scurvy etc. Moreover, there may be abortion, premature or stillbirth and bleeding. Therefore, keeping these important points in mind one must know the actual requirement of food for a pregnant woman. The daily requirement of food for a pregnant woman is given below-

Table - 4
Recommended Amounts of Balanced Diet during Pregnancy

Foodstuff	Amount
Cereals	475 gms
Pulses	55 gms

Leafy vegetables	100 gms
Other vegetables	40 gms
Roots and tubers	50 gms
Fruits	60 gms
Milk and Milk Products	250 gms
Fish, Meat and Egg	30 gms
Oils and Fats	40 gms
Sugar and Jaggery	40 gms

Now, let us briefly discuss about the recommended daily allowances of nutrients for a pregnant woman -

Calorie : There is a direct relation of maternal weight gain with calorie intake during pregnancy. Chances of premature birth increase if there is failure to gain weight during first six months of pregnancy. Approximately ~~2900~~ ²⁹⁴⁸ 2900 kilocalorie is required during pregnancy to an Indian woman of 45 kg body weight. During pregnancy some amount of energy is stored in the body as fat for the subsequent period. Hence, during this period an additional 300 calorie per day should be provided through food. This increased amount of calorie will fulfil the energy requirements for the developing foetus, placenta and cells including increased Basal Metabolic Rate.

Protein : Requirement of protein is more in second half of pregnancy. Because in later part of pregnancy development of foetus is very fast and formation of breast milk takes place. Protein helps in growth

and nourishment of the foetus and mother. Therefore, 15 gms of additional protein should be given to an expecting mother.)

Minerals : There is an increased necessity of minerals during pregnancy. More particularly calcium, phosphorus and iron are needed additionally. Calcium and phosphorus helps in formation of teeth and bones and keep them healthy. At birth 25-30 gms of calcium is stored in the body of a baby. It is generally stored during the last 2 months of pregnancy. So, towards later part of pregnancy an increment of 0.5 to 1.0 gm of calcium should be made. The amount of phosphorus also should be similar to that of calcium. This amount can be obtained easily from calcium and protein rich diets.

Iron is highly needed during pregnancy. Anaemia is a major cause of death of pregnant mother and foetus in our country. 35-40 gms of iron should be given daily through diet to prevent anaemia and for the well-being of the

foetus.) A pregnant woman already suffering from anaemia should take therapeutic dose of iron tablets in consultation with doctor in addition to iron rich food. (Iodine is required in sufficient amount to prevent goitre in mother and child.) Deficiency of iodine may lead to weak, sick and mentally retarded baby. So, iodized salts should be used.

Vitamins : Requirement of all the vitamins is more during pregnancy. Vitamins are required for growth, development and wellbeing of the body besides maintaining the resistance capacity. Vitamin A and D keep the skin healthy, make the teeth and bones strong in babies and keeps mother's uterus healthy. A pregnant woman should get 400 I.U. vitamin D daily. The water soluble and fat soluble vitamins can be obtained by eating balanced diet daily.)

A pregnant woman should eat all the nutrients in recommended amount in her diet. As such there is no restriction on diet during pregnancy. However, some important points should be realised and followed for the wellbeing of the baby and herself. Heavy meals at a time should be avoided and instead small meals at frequent intervals are advisable. Soft diets like fruit juice, vegetable soup etc. should be taken in the intervals of major

meals. Problems like constipation can be avoided by taking green vegetables like spinach, amaranthus, drumstick etc. and other fibrous fruits and vegetables. Sufficient amount of water also should be taken. Fried, spicy, frozen food and too much of salt and sugar should be avoided. Jaggery may be preferred in place of sugar because jaggery contains more iron which helps in the formation of haemoglobin.

A woman should gain 12.5 kg of body weight during the pregnancy period. If this weight gain is not achieved through proper diet there is possibility of delivering weak and underdeveloped baby. But to again, this weight fatty foods like meat, egg, butter, cream, ice-cream etc. should not be taken in excess amount. All the foods should be taken in right amount and more amount of fresh fruits and vegetables should be taken. Sprouted pulses will provide more amount of Vitamin C. Parboiled rice should be preferred which contain more amount of Vitamin B. It is advisable to use mixed pulses. At least 2 glasses of milk and some milk products should be taken daily. Various preparations of meat, fish, egg etc. should be provided regularly according to their taste and choice. Above all, the amount of food should be suitably increased and served in a healthy and pleasant atmosphere.

Table - 5
A Day's Sample Menu for A Pregnant Woman

Meal	Foodstuff	Amount
Early Morning (6 a.m.)	Tea	1 cup
Breakfast (8-9 a.m.)	Milk	1 glass
	Boiled Egg	1
	Roti	3
Mid-Morning (10-11 a.m.)	Fruit Juice	1 glass
	Banana or Guava	1
Lunch (12-1 p.m.)	Rice	2 bowls
	Fish Curry	1 katori
	Salads	1 plate
	Curd	1 katori
Tea-Time (3-4 p.m.)	Tea	1 cup
	Suji Halwa	1 katori
Evening Tea (6-7 p.m.)	Coffee	1 cup
	Cakes or Bisquits	2
Dinner (9 p.m.)	Rice	1 bowl
	Chapaties	2
	Dals	1 katori
	Mixed Vegetable	1 plate
	Fruit (Apple)	1
Bed-Time (10 p.m.)	Milk	1 glass