

Course Name: Adolescent Health and Well-being: A Holistic Approach

Professor Name: Dr. Sumana Samanta

**Department Name: Community Medicine, Dr. B. C. Roy Multi-Speciality Medical
Research Centre**

Institute Name: IIT Kharagpur

Week: 03

Lecture: 12

Lecture 12 – Dietary Counseling and Nutrition Planning

Hello everyone, let us start the session that will be on dietary counselling and nutrition planning.

Today we are going to learn about various steps of dietary counselling and the effective ways to provide it. Nutrition planning, we will have the concept of food groups and food guide and the various dietary guidelines provided by National Institute of Nutrition. I will give you some examples of balanced diet in adolescents and I will tell you how to improve the eating habits as well as few tips for the parents. Here are certain keywords like nutritional counselling, behavioral changes, food pyramid, my plate for the day, food guide, food groups and dietary goals.

Now, let us start with the concept of dietary or nutritional counselling. Actually, it is the application of psychotherapy and behavioral modification for altering the nutritional pattern. And with the help of this ultimately reduce the risk or eliminate the diseases like heart disease, hypertension, cancer, obesity, hyperlipidemia and diabetes. First and foremost thing is whenever the counsellor is going to do the counselling, he or she needs to ask about the food or eating habits of the person. A strong interpersonal relationship is required whenever you are providing some nutritional therapy. And this counselling session deals with certain emotional feelings like thoughts, behaviors and the barriers to make the healthy choices. Here comes the process of dietary counselling and it involves an in-depth approach rather than a very brief encounter. Various sessions are required to analyze the eating patterns or the food habits and ultimately you have to analyze the physiology and psychology of the individual. And the result will come out as a negotiated treatment plan. Because if I think that this is good for the person to whom you are giving the nutrition therapy, it may not be the possible way or the person may not be able to follow that advice. So, you have to consider his or her likings, you have to consider the surrounding environment in which he or she is growing up.

If you consider the pictorial diagram, here you can see that there are several steps where you need to act. Like whenever you are assessing the nutritional status that is the first time what the nutritional counsellor will do. Then you have to determine or you have to diagnose the nutritional deficiency or nutritional excess. Then you have to give your nutritional interventions that time also you have to do counselling. And finally, more sessions are required to do the monitoring and evaluation. If you think that you are giving the intervention, if you are telling the intervention to the person that you have to follow this and after that you are not following or you are not doing monitoring and evaluation then everything will be in vain. Because what we have seen, the people who need the nutrition therapy, they are not very eager to follow the strict dietary pattern. So, all the time even if the person is having the adequate nutritional intake and the person is overweight or obese or the person having the under nutrition in both the cases you have to do the monitoring very well. So, that you can see that whatever advice you have given, the person is adhering to that advice or not.

There is an important counselling pattern that is the client centre nutritional counselling. I personally prefer this pattern, because here the individual is responsible for the behavioral change process. And here the relationship between the nutritionist or and the person to whom you are giving the therapy that is like a partnership or friendship rather than a hierarchical pattern. The role of the counsellor will be to build the openness and trust by encouraging the self-understanding and insight in the client. It relies on individual's ability and willingness to make changes. And here client themselves make the decisions and maintain the healthy diet. Now here is the counselling model we should follow this 5 A's just to remember. First one is the assess that is the dietary history and willingness of the dietary modifications. Then is the agree that means you have to ask the person and you have to motivate the person. You have to recognize some realistic goals and changes which the client is willing to apply. Now you have to give the advice that dietary changes must be personalised to the client's lifestyle and health status and communicated in a very clear manner. And you have to assess the person to provide adequate information and support to encourage the behavioural changes. And finally, you have to arrange to continue care delivery with follow up and appropriate referrals.

Individuals undergoing the nutrition therapy they seldom adhere to stringent diet plan. And there is endless food which they must or must not eat. Actually, the advice you are giving that will be followed by the person or not that is completely depending on the individual's identity. So nutritional counselling is basically the combination of the knowledge of nutrition, behavioural sciences and psychology within the existing healthcare setting. Effective counselling occurs when the counsellor can understand the client's perception of nutritional advice.

Now comes the nutrition planning. We do this nutritional planning just to incorporate a healthy diet into our daily living. So, diet plan is just the integration of the principles of nutrition planning and the dietary reference indexes to create the simplified meals that are tailored to individual requirements. If you concentrate on the principles of the nutrition

planning you can see there are several factors like the adequacy, balance, calorie control, density, the moderation and the variety. Now we will go through one by one. What is adequacy? Adequacy means the diet must provide sufficient amount of nutrients which include the carbohydrates, fats, proteins, vitamins and minerals which is required for optimal growth and repair of tissues and cells.

You need a balanced diet that means it contain all the food groups. We will tell you about the food groups in the later slides. Now you need to do the calorie control. So, the main concept will be whatever energy you are taking by food you have to expense that energy. So, the energy balance you have to maintain. If there is excess of energy then definitely that will convert to or that will lead to your obesity or overweight. And if there is decrease of energy balance that means if the intake is less than the expenditure then there will be under nutrition. So, you have to balance this intake and output of the energy.

Nutrient density that is an important thing. Here what we actually measure? We actually measure the amount of nutrients a diet can provide in comparison to the amount of calories the diet supplies. Here comes the concept of empty calories. Nowadays in the genre of junk food and the many of the people specifically the adolescents they have a tendency to take the junk food very easily. So, what it actually do? It will increase your consumption of empty calories. That means it increase the calorie consumption to a considerable degree without providing any actual nutrients. Like we all like the means many of us like lime soda. So, lime water is good, but whenever you are adding the soda then definitely the calorie content of that drink is increasing.

Next is moderation. So, we think that no unwanted constituent should be there in the diet. And few components like salt, sugar and fat that should be present in moderation. Again, another thing is the variety. If you take the variety of foods then you will get the variety of nutrients like vitamin A, vitamin D, vitamin C. We have told you that there are certain foods which will give you vitamin A, there are certain foods will give you vitamin C. So, if you do not take this variation of the food or if you do not take the variety of food groups then certain nutrient deficiency can occur through your diet.

Now comes the idea of food groups. Actually, the idea is whenever we are thinking to make the diet plan, we think that we have to put the foods from different food groups. It is to simplify the process of diet planning. Food groups include the biologically related foods that share the common nutritional properties. And depending on that we can divide all the foods in major 5 groups like cereals, grains and products, pulses and legumes, milk and meat products it includes the fish egg and meat, fruits and vegetables, fats and sugars. Now the classification of food groups that based on the function. Here we can see that there are certain foods which are energy rich food like carbohydrates and fats. And the examples are whole grain cereals, millets, vegetable oils, ghee, butter, nuts, oil seeds and sugars. And certain foods which are body building like proteins, pulses, milk and milk products, nuts, meat, fish and poultry. Some are there which are protective foods like vitamins and minerals. And we get it from the green leafy vegetables and other vegetables and fruits,

eggs, milk and milk products. So, whenever you are planning your diet, you have to consider all type of food groups in your diet.

Here are the dietary goals. So why we will take variety of foods, why we will try to take all types of the food groups, why we will take the balanced diet in our day-to-day life.? What is the reason? The reason is we want to maintain the positive health and the optimal performance by maintaining the ideal body weight. We want to ensure the adequate nutritional status to the pregnant women and the lactating mothers. Improvement of birth weights and promotions of growth of the infants, children and adolescents to achieve their full genetic potential. We want to achieve the adequacy in all the nutrients and prevention of deficiency disorders. We want to prevent some chronic diet related disorder. And also we want to maintain a healthy life in the elderly and increase the life expectancy. So, you can see that this nutritional status in all stages of life is very important. From the very beginning if you think about the pregnant mother. Then coming to the child the infants, then coming to the children of less than 5 years of age, then coming to the important age group that is the 5 to 10 years of age, then coming to the adolescent age group, next we can come to young adults, then we can come to adults and then we can come to geriatric population. So, in all the age group means throughout our life cycle we need to maintain a good nutritional status. Then only we can prevent lots of diseases and we will get a healthy life and we can increase our life expectancy.

Now some food guides, the food pyramid is a pictorial guide which aids in the development of diet plan. In this guide you can see that similar type of nutrients they are grouped in the same self. And the base of the pyramid has food groups which must be consumed in a larger amount and foods which are in the higher up in the pyramids that will be consumed very less amount. And there is no smoking and no alcohol along with that you have to take adequate amount of physical activity.

Then comes the concept of my plate, it is published by USDA various food groups that are depicted in the section of a pie. Here you can see that the plate surface that is again divided into sectors to depict the grains, proteins, vegetables, fruits and dairy. And from our country the ICMR they have also published “my plate for the day”. Here in this picture, you can see some quantity, you can see different food groups what it notifies or what is depicts is actually the consumption of the proportion of the food groups indicated in this plate that prevent the micro and macro nutrient malnutrition which is another name of the hidden hunger. Even the person is not overweight, even the person is not underweighted, but he or may suffer from certain micro and macro nutrient deficiency which is called hidden hunger. The amount is given here for the adult population. The amount if you take in this ratio in this manner then definitely it will prevent the various micro and macro nutrient in our deficiency in our body.

Next comes another concept that is the healthy eating plate. It is actually developed by the Howard medical school, it is just the modification of the my plate. In this pictorial diagram you can see that there is added recommendation on consumption of healthy oils and physical activity. And comparing to the food pyramid you can see the consumption of more

fruits and whole grains, fish, poultry, nuts, seeds, beans and vegetables that is been recommended. But it is recommended that red meat butter refined grains and potatoes should be taken in less amount and that limited dairy consumption is also advised in this healthy eating plate.

This is the traffic lights food guide and this is very easy to remember for the children actually and definitely for adolescents. So, what it actually says? It actually says that the green means you can consume freely as per recommendations like the fruits vegetables and whole grains no bar in that you can take it as much as possible. But in yellow that can be consumed in a limited amounts like low fat meats dairy. And the red that must be avoided and consumed very less that is fried food, candy and baked goods.

Now, there are certain guidelines by National Institute of Nutrition. If we try to follow those guidelines in our day-to-day life then definitely, we have a healthy life or we will not suffer the deficiency even we will not be overweight or obese. Let us see what are those guidelines one by one.

First and foremost is eat variety of foods to ensure a balanced diet. Second, nutrition is ensured by consumption of variety of foods. Provision of extra food and health care to the pregnant and lactating mother. And because during the pregnancy and lactation the requirements need more and for Indian women's they must contain more calories, proteins and micronutrients. Here is the recommendation. In the first, second and third trimester they should take added 350 kilo calorie and the protein should be 78 gram per day. Whereas, in case of lactating moment the first 0 to 6 months additional calorie will be 600 kilo calorie and the protein will be 74 gram per day. In the later part of the lactation here also they need more calorie that is 520 kilo calorie per day and 68-gram protein per day. And micronutrients are also to be added through diet like folic acid, calcium, iron, iodine, vitamin A, vitamin C and vitamin B 12.

Next is exclusive breastfeeding for 6 months and encourage breastfeeding for 2 years or more if possible. And feed home based semi solid complementary food to the infants after 6 months. And ensure adequate and appropriate diets for children and adolescents both in the normal health and in the sickness. In addition to the calorie to the children and adolescents diet it must contain high quality of protein, dairy products, vegetables and fruits. Physical activity should be promoted and overeating and indiscriminated dieting must be discouraged.

Try to eat plenty of vegetables and fruits a well-balanced diet should be recommended. And the another thing is ensure moderate use of edible oils and animal foods and very less use of ghee, butter and banaspati. Avoid overeating to prevent overweight and obesity. Consume the complex carbohydrate and low glycemic fiber rich food is encouraged. Soft drinks, refined foods, alcohol, sugar, salt, banaspati and sweets are discouraged. Exercise regularly to maintain a healthy body weight. Already we have a session which will guide you that how much or what are the different types of exercise you should do during this

period. How long you will do that exercise? How much will be the duration in the whole week? And everything will be guided in another lecture of this course.

Restrict salt intake to minimum that is foods like pickles, sauces, ketchup, salt biscuits, chips that content added salt. And consume a very minimal quantity. Iron fortified iodized salt that reduces the risk of anemia and goiter. Ensure the use of safe and clean foods. Adulterants, microorganisms, insects, rodents, toxins, chemical residues they actually make food unsafe. So, whenever you want to consume the fruits and vegetables just wash it very thoroughly and then consume it. Raw cooked and perishable foods that should be stored separately. Personal hygiene, environment and cleanliness to be maintained whenever you are thinking to prepare cooking or whenever you are going to eat all the time you just wash your hands with soap and water.

Adopt right precooking process and appropriate cooking methods. Because individual cultures and belief that actually influence the food habits or the cooking pattern. Few cooking procedures are there which can reduce the quantity of the nutrients of the food. Like washing of food grains repeatedly, soaking or washing the cut vegetables, deep frying and roasting, try to avoid those things. And try to think about that how the cooking makes the food palatable, easy to digest and destroys the microbes. And along with that you have to conserve the nutrients within the food.

Take plenty of water and take beverages in moderation. Beverages like fruit juice, butter milk and tender coconut they are very beneficial. And tea, coffee those are stimulants and can be consumed in moderation. And consumption of alcohol must be avoided. Minimize the use of processed food that already been told those are the junk food and they actually contain the high amount of salt, sugar and fats. That ultimately lead to increase consumption of empty calories, excess salts and saturated fats. They lead to obesity, diabetes and hypertension in the later life. Include micronutrient rich foods in the diet of the elderly people. So that they also be fit and active in their life.

Now some tips for the parents. You ensure that your child is getting adequate sleep. Because if the sleep is not adequate then it is associated with obesity. Inadequate sleep makes it more to have junk foods and the person becomes less physically active. For 8 to 10 hours sleep in 24 hours is recommended for the adolescents. Limit the screen time that is watching television, playing video games and surfing the web to no more than 2 hours per day. And encourage the children to find some activities so that there is more physical activity occurs. Develop few healthy eating habits like ensure that they can take more vegetables, fruits and whole grain products. Include low fat and non fat milk or dairy products. Choose lean meat, poultry, fish, lentils. Encourage to drink lots of water.

Limit sugary drinks and limit calorie rich temptations. Reduce the availability of high fat, high sugar and salty snacks. Regular physical activity is very much needed, minimum 60 minutes per day. Because it will strengthen the bones, decrease the blood pressure, reduce the stress and anxiety, it will increase your self esteem and help in weight management. So healthy eating and regular exercise for healthy weight are very much required.

Making sudden and radical changes in the diet is not at all good. Because it can lead to short term weight loss but it will not be successful for long run. So if you want to permanently improve your eating habits then you have to think or you have to go through the 3 approach. You have to reflect on all the specific eating habits both bad and good and common triggers for unhealthy eating. You need to replace the unhealthy eating habits with healthier ones and you have to reinforce the new healthier eating habits. Here are the samples of balance diet. You can go through it. The parents are requested that you can follow this and you can give this diet to your children.

Here are my references for this session.

Finally, I want to conclude with the thought that success is the sum of small efforts repeated day in and day out.

Thank you all and enjoy learning.