

# DOWNLOAD PDF NUTRITION COUNSELING FOR DENTAL CARIES PREVENTION

## Chapter 1 : Nutritional Counseling in Prevention of Caries – A Team Approach

*Providing patients with age-appropriate anticipatory guidance, nutritional counseling on caries prevention, assessment and timely referrals should be a co-ordinated team approach involving pediatricians and dentists particularly the pediatric dentists.*

Maintenance Change is a process. The degree of readiness or willingness to change is self-determined. As an individual moves through the stages, he or she is likely to move forward and backward. Every move is part of the learning process. It is important to create awareness among patients that moving backward after they have moved forward is not a sign of failure, but a sign that they are trying. There is an assumption that dietary habits are learned behaviors and that they can be unlearned and replaced with new behaviors. Stages of Change 14,15 Precontemplation: It is difficult for them to get started. The patient uses denial to remain safe and not fail. Pointing out the relationship between diet and disease and increased risk may get them moving in the right direction. Making the patient consciously aware of the need to change is useful at this stage. They are not yet committed. Patients are considering change, but have not done anything to change. Encourage them to keep a food record just to see how much fat is in their diet. Being able to see where change is needed will help them to set small goals. Social support from family and friends is important during this stage of change. Patients are trying to adopt a new habit, but have not been able to be consistent. They believe that the pros outweigh the cons of behavior change. They may seek out information on how to change or may even try the new habit. These patients need encouragement and support. Working with the patient to develop a plan of action is important at this point. Patients are moving forward with change. Patients have made the change and are no longer thinking about it. Patients should establish a support network. Rewards and a supportive environment will encourage continued progress at this stage. It is important to emphasize that changes should be gradual and that too many changes all at once can result in failure. The skills and strategies for sustaining the new behavior have been developed. Although patients feel like they have reached the finish line, there is still room for relapse because of self-blame or overconfidence. Setting new goals for further change is encouraged. Staying away from temptation, establishing a reward system, and identifying helpful relationships can make the transition into this stage a lifetime commitment. Providing Nutrition Education Nutrition services provided in the dental practice should focus on educating the patient about the relationship between diet and dental health. The Dietary Guidelines for Americans can provide further guidance. A dental practice in Pacific Grove, California, developed what they called a nutrition nook. Foods high in sugar vs low-sugar alternatives were displayed. Informational brochures were located beneath the shelves. Comfortable seats were provided so that the patient could sit down and read through materials before the dental appointment. The health professional usually controls the session by giving detailed instructions. The advantage of the direct approach of counseling is that it usually requires little time, but it limits the chance of long-term success because the patient is not committed to dietary changes; he or she is merely listening to what is being said. However, the direct approach toward changing food behaviors may be necessary when a patient has a life-threatening condition, such as kidney failure. This type of approach is nondirect with the patient actively participating. The likelihood of success increases because the patient is actively involved in the process. Being specific Setting short-term goals to reach long-term goals Encouraging self-monitoring to track progress It is important for the patient to develop specific and realistic goals. Encourage patients to create a plan that involves small, achievable goals. This will help them gain the self-confidence needed to continue working toward a long-term goal. The patients can identify those things that they feel are the most important about making the change, and discuss those things they perceive as barriers. Encourage the patient to develop a priority list, which should include those things that the patient would like to work on before the next meeting. Finally, have the patient self-monitor. By tracking progress, a patient will identify areas that are strengths and weaknesses. This will allow greater focus as they continue toward their long-term goal. Establishing Personal

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Rewards Making changes can be discouraging and frustrating, especially if expectations are not met immediately. To deal with this difficulty, patients should reward themselves throughout their process of change. Rewards can be set for both short-term and long-term goals. Rewards can be tangible, such as books, or tickets to a movie, concert, or sporting event. Rewards also can be intangible, such as praise, feeling happier, having more energy, or feeling more confident. Patients should learn how to reward themselves so that the discouraging moments are a little easier to handle. Self-monitoring is of key importance because it allows patients to notice when an improvement occurs. Also important is enlisting the support of others. Encourage patients to create support groups that will help keep them on track. Remind them that progress, not perfection, is what counts. Providing Follow-up The success of a dietary behavior change depends on the patient. Goals must be established and clearly understood. Future appointments should be set so that ongoing feedback and reevaluation can be provided. Although desirable, a short time between visits is probably not feasible. Instead, 3-month and 6-month reevaluation appointments should be established. Before the 3-month recall, the patient could be sent information with directions for keeping a 3- to 7-day food record to be reviewed during the appointment. Plaque control procedures should be reviewed if the dietary concerns are related to an increase in caries rate. Because the primary focus is on the types of foods the patient consumes that could affect dental health, particular emphasis should be placed on sticky foods, liquid sugar, and slowly dissolving sugar. Modifications of goals also may be necessary. Smaller goals may be needed to encourage the patient to stick with the plan. Progress should be documented in the chart. If needed, additional materials should be distributed and plans for continued change discussed. A dietary follow-up can be incorporated as part of the regularly scheduled recall appointment. Charting should be compared with recorded data from the previous recall appointment, whether 3-, 4-, or 6-month interval. If caries continues to be a problem, a topical application of fluoride might be recommended. Finally, dietary recommendations should be made in accordance with information derived from the updated assessment. Progress should be documented, education should be provided, and a continued plan of action established. This evaluation process should continue until the desired behavior change has been accomplished. Remember, success depends on learning by the patient and, to learn, the patient must be involved in the whole process. The patient will set the goals, and the healthcare provider will be the cheerleader who encourages achievement of those goals. Conclusion Nutritional counseling is an important aspect of the dental hygiene process of care, one that can be easily incorporated into the dental practice setting. It allows the dental professional to identify patients at nutritional risk and make appropriate recommendations or referrals. It is a value-added service that not only enhances a practice, but also provides the dental professional with an opportunity to make a difference in the lives of patients. American Dental Association; Accessed May 8, Oral health emphasis in dietetic internship programs. J Am Diet Assoc. Nutrition, diet and oral conditions. Upper Saddle River, NJ: Osteoporosis and the risk of tooth loss. The patient with diabetes mellitus: Periodontal diseases and the risk of preterm birth and low birth weight: Elborn S, Karp WR. The dietitian as a member of the dental health care team. Psychotherapy Theory, Research, Practice, Training. The transtheoretical model and stages of change. Health Behavior and Health Education: Theory, Research, and Practice. Dietary Guidelines for Americans Home and Garden Bulletin No.

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## Chapter 2 : Sugars and dental caries | The American Journal of Clinical Nutrition | Oxford Academic

*Nutritional counseling for prevention of dental caries in adolescents Susan E. Shank, MS Miss Shank is an instructor in foods and nutrition, Indiana State University, Indiana Indiana State University Indiana Helen A. Guthrie, PhD Pa. Dr. Guthrie is head of the nutrition program, Division of Biological Health, College of Human Development.*

Import into RefWorks 1. Introduction Since the beginning of the twentieth century, the medical profession has recognized the importance of providing prenatal counseling and care to expectant mothers. Only recently has the dental profession become involved in this primary preventive effort. Comprehensive dental care includes consideration of the nutritional aspects of oral health and disease, besides determining other potential health risks. Close collaboration among members of the various health professions and community support groups e. Role in Prevention of Caries Often Pediatricians are the first persons to confront morbidity associated with dental caries [ 5 ] and thus have an opportunity to prevent, intervene, and, in collaboration with dental colleagues, manage this disease. Primary prevention involves optimization of maternal dental flora before and during colonization of the oral flora of the infant. Secondary preventive strategies are hierarchical consisting of dietary counseling, oral hygiene instructions, and judicious use of fluoride. The role of pediatrician in the case of dental caries risk assessment information can be divided into three categories Category I comprises markers of disease that are provided by the patient and parent through the history and physical examination. The presence of many of these markers can be determined by the pediatrician. Category II comprises disease markers and the single true risk factor for dental caries, the presence of Mutans Streptococci. Some of the factors in Category II can be appreciated by pediatricians, but most require dental training or technologies not likely to be present in a pediatric office. Determination of Category III markers requires the use of technologies that are not practical for clinical use at this time [ 8 ]. Prematurity and very low birth weight are associated with the presence of enamel defects, often subclinical, that can predispose teeth to caries at an early age. An increased risk also exists for children who have taken syrup-based medications on a long-term basis. A history of early childhood caries is one of the best indicators of future dental disease, so pediatricians should routinely evaluate the dentition for obvious carious lesions or evidence of dental restorations. By determining risk factors, the dentist can also individualize a preventive plan with protective factors that promote oral health. Risk factors can change over time. Therefore, the dentist must assess the status periodically and make appropriate modifications Casamassimo, Anticipatory Guidance Pediatricians and pediatric dentists interested in promoting good oral health should identify demographic and socioeconomic risk factors for dental caries and flag high-risk children as being in need of more intensive preventive counseling. Before the eruption of teeth, parents should be taught basic information about the role of diet in promoting good oral health, and dietary factors that can lead to dental decay. Pediatricians should advise parents about appropriate foods and snacks. Inappropriate use of nursing bottles and "sippy" cups as pacifiers should be discussed. Breast-feeding is ideal nutrition and sufficient to support optimal growth and development for about the first 4â€”6 months after birth. Transition to other sources of nutrients should begin at about 4â€”6 months of age to ensure sufficient micronutrients in the diet. Parents should be apprised of the dental effects of the prolonged use of high-sugar liquids and foods. The pediatrician should demonstrate methods of cleaning the oral cavity and, when erupted, the teeth. Physicians should consider sugar-free alternatives, if available. If a family does not have access to dental care, physicians should refer to a community dental clinic or health department for care and treatment as needed. Immediate referral for infants with an apparent dental problem due to trauma, disease, or developmental abnormality 2. Examination at no later than 6 months after eruption of the first tooth for infants at high risk for dental disease 3. Examination at no later than 18 months for infants not at high risk for dental disease [ 6 ]. Bright Futuresâ€™ Guidelines for Health Supervision of Infants, Children, and Adolescents Green, is a comprehensive and practical resource designed to assist health professionals and families to more effectively promote the health and well-being of all children and adolescents. Conclusion

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Dental caries is a diet related disease that continues to be a problem for majority of the population. Primary health care providers and dentists should thoroughly understand the relationship of diet to caries and conscientiously apply that knowledge to educate the patients in general as well as counsel special high risk individuals. Thus a collaborative effort is mandatory for the successful implementation of nutritional counseling in pediatric medical and dental settings. It is time to think and act together. References [1] Palmer CA. Nutrition, diet and oral conditions. Upper Saddle River, NJ:

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## Chapter 3 : Nutritional Assessment and Oral Health - Decisions in Dentistry

*NUTRITIONAL COUNSELING FOR THE DENTAL HYGIENE PATIENT. NUTRITION AND DENTAL CARIES Fluoride Usage/Prevention and Control of Dental Caries. Features.*

Definitions of terms Anticariogenic: Previously called baby bottle tooth decay or maxillary anterior caries; refers to one or more primary maxillary incisors that is decayed, missing or filled Fermentable carbohydrate: Diet has a local effect on oral health, primarily on the integrity of the teeth, pH, and composition of the saliva and plaque. Nutrition, however, has a systemic effect on the integrity of the oral cavity, including teeth, periodontium supporting structure of the teeth, oral mucosa, and alveolar bone. Alterations in nutrient intake secondary to changes in diet intake, absorption, metabolism, or excretion can affect the integrity of the teeth, surrounding tissues, and bone as well as the response to wound healing. Tooth erosion is not an infectious disease, but the resultant defects impair the integrity of the tooth. The etiology of the diseases differs with the extent to which diet and nutrition are involved. Although enamel defects may be related to nutrition during tooth formation, they are not addressed here. Tooth erosion is the progressive loss of dental hard tissue by acids in a process that does not involve bacteria or sugars. The intrinsic acids are from vomiting, gastroesophageal reflux, and regurgitation 3. The extrinsic acids are from the diet [eg, sports beverages 4 and citrus products, including citrus fruit, juices, soft drinks, and citrus-flavored candies and lozenges] or from the occupational environment eg, battery and galvanizing factories 5. Tooth erosion as a result of eating disorders bulimia nervosa 6 and dietary practices involving frequent intake of acidic foods and beverages 7 can weaken tooth integrity. Caries is caused by the dissolution of the teeth by acid produced by the metabolism of dietary carbohydrates by oral bacteria. The 2 primary bacteria involved in caries formation are mutans streptococci and lactobacilli. In the s the caries theory was depicted as 3 circles representing the 3 prerequisites for dental caries: Since then, many modifying factors have been recognized, resulting in a more complex model that includes saliva, the immune system, time, socioeconomic status, level of education, lifestyle behaviors, and the use of fluorides. An important breakthrough in the understanding of dental caries was the recognition of the remineralization process as a result of plaque fluid and saliva at pH levels above a critical value being highly saturated with calcium and phosphates. The caries process can be described as loss of mineral demineralization when the pH of plaque drops below the critical pH value of 5. Redisposition of mineral remineralization occurs when the pH of plaque rises. The presence of fluoride reduces the critical pH by 0. Whether a lesion develops is the outcome of the balance between demineralization and remineralization, in which the latter process is significantly slower than the former.

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## Chapter 4 : Diet and general health: dietary counselling.

*Nutrition counseling has an important place in the dental care setting given the clear relationship between dietary factors and dental caries and the association between obesity, diabetes and periodontitis. Nutritional counseling can be defined as a.*

Dental decay is a very frequent bacterial illness in the population today. It affects adults as well as children. How does dental decay develop? Dental plaque develops rapidly and adheres to teeth. It is made up of food remains, saliva, and bacteria. Bacteria of dental plaque feeds on sugar from food and secretes acids that attack the surface of the tooth enamel and leading to the formation of a cavity called dental caries decay. Without treatment, the decay process continues its evolution until the total destruction of the tooth. How does dental caries manifest itself? Symptoms are rare during the first stages of the development of dental caries. Pain is a misleading alarm signal. It is only when the dental caries progresses that the symptoms appear: If the dental pulp nerve is affected, the tooth can die and be at the origin of a dental abscess. How can dental caries be prevented? The risk to develop caries depends mainly on three factors: Genetic predisposition, the composition of saliva and bacterial flora, teeth alignment Dental caries is clearly an infectious bacterial illness, but it can be avoided by good prevention. It is important to adopt good habits as early as possible: Prefer water to sugary drinks Avoid snacks between meals Do not eat food after brushing teeth before going to bed Brush teeth regularly and include a method of interdental cleaning Regular screening by a dentist is indispensable and it is recommended at least once a year. How are dental caries treated? Early treatment of dental caries and new technology enable today less invasive and less expensive treatment. The evolution of dental material offers the possibility of composite resin fillings that are resistant and aesthetic white. When the dental caries is not too advanced, the treatment objective is to preserve the living tooth. Under local anaesthetic, the dental surgeon removes the dental caries with different drills, then rebuilds the tooth with white composite resin now replaces grey metallic amalgam fillings. Replacement of fillings Dental amalgam contains mainly mercury and silver, as well as a lower quantity of other metals. Dental caries can develop under old amalgam fillings without being obligatorily visible to the naked eye or even by X-ray. In addition, these old filling techniques lead to cracks over the years, and even dental fractures. The replacement of old amalgam fillings by composite resin is therefore often recommended. The most frequent question raised is the eventual toxicity related to the replacement of amalgam. At present, there is no undisputed scientific evidence to confirm the reality of this toxicity. For this reason, we do not recommend a systematic replacement of these fillings if in a good state and, at low risk of provoking dental fractures. Our treatment Regular dental examinations at our centre comprise a complete clinical assessment associated with digital X-rays, when indicated, and the use of an electronic caries detector based on fluorescence technology DIAGNOdent r.

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## Chapter 5 : NUTRITION OF CHILDREN AND PREVENTION OF CARIES – mclinic

*Ideally, all members of the dental team serve as health care educators, and this instruction should include diet and nutrition counseling for the prevention and treatment of oral health conditions. Diet, defined as the combination of foods and beverages consumed, may impact caries risk, soft tissue health, and responses to injury and infection.*

The author has no commercial conflicts of interest to disclose. This 2 credit hour self-study activity is electronically mediated. Define the impact of diet on oral health. Discuss how to perform nutritional assessment and provide dietary counseling in the dental setting. Identify strategies to help patients understand how dietary changes may improve their oral health. Ideally, all members of the dental team serve as health care educators, and this instruction should include diet and nutrition counseling for the prevention and treatment of oral health conditions. Diet, defined as the combination of foods and beverages consumed, may impact caries risk, soft tissue health, and responses to injury and infection. Nutrients contained within foods are essential for growth, maintaining tissue health, repairing injured tissue, and providing energy for daily activities. Oral health professionals should recognize dietary contributors to disease, and routinely assess and manage nutrition-related risks. Dental caries is a disease in which the acid produced by oral microorganisms dissolves enamel or dentin in a specific location. Oral pathogens cannot ferment proteins, fats or nonnutritive sweeteners, such as aspartame and sucralose. Dietary carbohydrates at risk for fermentation include sugars, starches and hydrolyzed starch products. Starches are long saccharide chains that are made from sugars. They are found in grains, vegetables and baked goods. Intermediary carbohydrates produced by the hydrolysis of starches are also fermentable by oral microbes. Hydrolysis – the splitting of large carbohydrates into small carbohydrates through the addition of water – slowly severs the bonds of starch molecules. This results in fewer saccharide units per molecule. On food labels, hydrolyzed sugars are called modified starches, oligosaccharides and maltodextrins. The caries risk associated with foods depends on their carbohydrate composition and manner of consumption Figure 1. Typically, unsweetened grains, vegetables, fruits and dairy products present low caries risk. These can, in time, be fermented by the oral microbiota. Beverages made with natural sugars or added sugars are associated with higher caries risk than solid foods containing sugars. Certain oral habits, such as swishing beverages, holding foods and beverages in the mouth, and pocketing foods in the cheek, are associated with increased caries risk. A significant reduction or elimination of foods containing added sugars is a prudent dietary goal. When added sugar is consumed, behaviors that limit oral exposure time – such as brief, structured eating intervals, prompt swallowing of chewed food, and the use of straws – tend to decrease caries risk. In addition, rinsing with water, chewing sugar-free gum, and appropriate oral hygiene practices also reduce caries risk. In order to allow saliva to neutralize the oral cavity, patients should be advised to wait to brush their teeth for at least 20 minutes following consumption of acidic foods and beverages. Conversely, prevention and treatment of periodontal disease depends on a functioning immune system – which, in turn, depends on appropriate nutrition. Nutrition-related conditions, including obesity and poorly controlled diabetes, increase the risk of periodontal disease. Adequate energy calories and protein are necessary for daily activities and metabolic functions. Without adequate energy or protein, individuals become lethargic, growth slows, wound healing is impaired, and susceptibility to infection increases. Many nutrients have essential functions that support the immune system. In general, periodontal disease is more common and severe in individuals with protein-energy malnutrition compared to properly nourished individuals. Nutritional supplements may be appropriate for addressing deficiencies for short intervals, however. For example, individuals who smoke often have low serum vitamin C levels and might benefit from vitamin C supplements. Subsequent stages include planning and implementing interventions, and evaluating their effectiveness. The depth of this process depends on the goals of the assessment, which can range from helping patients make better food choices to identifying malnourished individuals. Although malnutrition suggests deficient intake of energy or nutrients, it can also stem from excessive intake of energy

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or nutrients, or an imbalance of nutrient consumption. Secondary causes are not necessarily associated with dietary intake but, rather, are problems relating to the absorption, utilization or excretion of nutrients. A nutritional assessment includes questions regarding the frequency of exposure to fermentable carbohydrates, history of sweetened beverage consumption, level of compliance with ChooseMyPlate recommendations, and history of weight loss or gain of more than 10 pounds during the preceding six months. Patients identified as high risk for malnutrition during the initial screening, or those who have diet-related conditions, should receive a more detailed nutritional assessment that includes an examination of medical, social and medication histories, anthropometrics, physical examination, and diet assessment. This information process provides the foundation for identifying appropriate interventions. Assessing medical histories is designed to identify illnesses and treatments or conditions that increase the risk of malnutrition. Anthropometrics refer to measures of body size and proportion, which provide an indirect assessment of body composition. Weight and height are the most common measurements taken, but recording waist and hip circumference is increasingly common. Waist circumference or the waist-to-hip ratio can identify the presence of abdominal obesity, which is strongly associated with metabolic disorders, such as type 2 diabetes and cardiovascular disease. Dry skin, brittle hair, pale eyes and mottled nails are consistent with visible nutrient deficiencies. Changes to oral tissues including magenta tongue, cracked lips or bleeding gums also suggest nutrient deficiencies. In the assessment of dietary behaviors, current and past food consumption is recorded and compared to the nutritional guidelines provided by ChooseMyPlate to identify inadequate or excessive food intakes. For example, a patient recognized that his or her high intake of sugar-sweetened beverages was causing recurrent caries and took steps to eliminate these beverages from his or her diet. Dietary habits, such as meal patterns, location of consumption, and frequency of intake, are assessed to identify factors that influence the length of carbohydrate exposures. Dietary intake can be assessed by asking patients to recall what they have eaten over the past 24 hours or what they typically eat in a day, or through the use of food records and food frequency reports. Food records require patients to record their food consumption for three to seven days. Most dietary assessment tools include questions about behaviors associated with food intake. Once strategies for modifying the diet are identified, patient counseling can begin. The patient should be informed of his or her oral health status, risk for oral diseases, and how dietary behaviors influence risk. In order to make informed decisions regarding behavioral changes, the patient needs to understand the relationship between oral health concerns and diet. Change is difficult for most individuals, and multiple modifications are often required before an acceptable diet can be implemented. As such, the recommended strategies should be prioritized based on the most pressing health concerns. Patients should be provided with the desired behavior outcome and multiple strategies for achieving the outcome. Because food is not consumed in isolation, a change in one area of the diet often impacts other areas of dietary consumption. Thus, additional strategies should be presented as anticipatory guidance in advance of expected difficulties. Dietary counseling is not simply telling patients what to do. In order to be effective, it is a negotiation between the clinician and patient. To assist patients in achieving dietary change, both motivational interviewing and self-determination theory are appropriate counseling approaches. Understanding the relationships between oral disease, nutritional intake and dietary behaviors is the foundation for patient education. Preventing dental caries associated with sugar-sweetened beverages. *J Am Dent Assoc.* Nomenclature, characteristics, and dietary intakes of sugars. An evaluation of the acidogenic potential of maltodextrins in vivo. Dental caries and beverage consumption in young children. Diet and caries-associated bacteria in severe early childhood caries. Dietary intake and severe early childhood caries in low-income, young children. *J Acad Nutr Diet.* The roles of meal, snack, and daily total food and beverage exposures on caries experience in young children. *J Public Health Dent.* Practice Paper of the Academy of Nutrition and Dietetics. Oral Health and Nutrition. Acidic beverages increase the risk of in vitro tooth erosion. In vitro enamel erosion associated with commercially available original-flavor and sour versions of candies. Update on nutrition and periodontal disease. Nutrition, dietary guidelines and optimal periodontal health. Fat cell size, insulin sensitivity, and inflammation in obese children. Total body weight and waist

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circumference associated with chronic periodontitis among adolescents in the United States. Arch Pediatr Adolesc Med. Fiveyear incidence of periodontal disease is related to body mass index. Position of the Academy of Nutrition and Dietetics: Department of Agriculture and U. Department of Health and Human Services. Dietary Guidelines for Americans, Government Printing Office; Dietary Guidelines for Americans â€” Accessed July 8, Nutrition-focused physical examination in pediatric patients. Radler DR, Mobley C. Obesity and oral health across the lifespan. Nutrition and Oral Medicine. Chairside diet assessment of caries risk. Patrick H, Williams GC.

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## Chapter 6 : Diet & Nutrition: Dental diseases

*Competent and timely dental nutritional counseling is an important and very effective direction of dental caries prevention. This problem is especially acute in children.*

Competent and timely dental nutritional counseling is an important and very effective direction of dental caries prevention. This problem is especially acute in children. The nature of human nutrition is one of the main factors determining the activity of dental deposits and the condition of hard tooth tissues. Food affects the enamel of the tooth indirectly through the change in the acidity of the plaque. The clinical result of this alternation can be either the destruction of the enamel of the tooth, or the preservation of its integrity. The magnitude of the change in acidity is determined by the properties of the microflora of the mouth, food and saliva. Speaking about the role of nutrition in the development of the carious process and planning preventive measures, several groups of factors should be kept in mind: Their influence can carry both aggressive potential in relation to the tooth, and participate in the implementation of protective mechanisms. Factors of food can be both aggressive significant carbohydrate content, dense consistency, high stickiness, and protective salivary effect, the presence of calcium ions, phosphorus, fluorides. The consumption of sugar and the taste of the sweet, especially in children, is associated with pleasure. The addiction to sugar is maintained and physiologically "sucrose is rapidly absorbed in the gastrointestinal tract and creates a saturation effect. In addition, traditionally, sweets are perceived as a gift or a reward, which makes them psychologically very desirable. But sugar has high cariogenic and acidogenic properties. As a result of numerous epidemiological studies, it was concluded that sugar is the main culprit in the growth of caries when consuming more than 40 grams per day. For a long time dentists advised to replace sweet foods with fruits and vegetables, counting on the presence of citric acid in them, which stimulates salivation, and the mechanical effect of fiber on dental deposits. However, today it is known that fruits and vegetables contain natural sugars and therefore have a high acidogenic ability to turn into an acid potential, and purifying and neutralizing effects are insignificant. Today, the question of the cariogenicity of milk sugar is important in the prevention of caries of temporary teeth. Food, containing proteins and fats, has a protective effect. Proteins help improve the quality of saliva increases the mineralizing potential, after cleavage enriches the saliva with alkaline products. Fats form a hydrophobic film on the tooth surface, preventing the growth and formation of dental deposits. It is necessary to learn how to properly evaluate the products most often used for snacks confectionery and bakery products, fruits and juices, etc. The optimal way to minimize the cariogenic effects of food is to perform hygiene procedures "brushing teeth with a brush, paste and thread. Rinsing with water after eating does not affect the process of acid formation in the plaque. Somewhat higher protective effect of rinsing with solutions of soda or citric acid. Reasonable diet, which involves reducing the duration of food in the mouth: Limitation of the total number of snacks up to two per day, replacement of sweet and fruit snacks by alkaline: The use of chewing gums can not replace the cleaning of teeth, and also has a number of side effects, so it requires compliance with a number of rules for their use. They should be chewed.

## Chapter 7 : Treatment of caries

*The treatment of dental caries is expensive for governments of both developed and developing countries and costs between 5 and 10% of total health care expenditures.*