

Oral health in childhood

Lara Vranić¹

prof. dr. sc. Dubravka Negovetić Vranić²

[1] 4th year student, School of Dental Medicine Zagreb

[2] Department of Pediatric Dentistry, School of Dental Medicine

Ovim člankom najavljujemo suradnju s našim dragim studentima Engleskog studija te ih potičemo da se aktivno uključe u Sondu!

With this article, we are announcing cooperation with our dear students in English studies and encourage them to actively participate in Sonda!


Oral health is an essential component of a person's health. According to World Health Organization (WHO), about 60 percent to 90 percent of children and nearly every adult in the world have dental cavities (1). According to American Dental Association (ADA), "oral health is a functional, structural, aesthetic, physiologic, and psychosocial state of well-being and is essential to an individual's general health and quality of life" (2). Dentists top priority is to keep their patients' bright smiles on their faces. Adequate oral hygiene is critical for maintaining the health of the teeth and periodontium. Only through regular and proper oral hygiene maintenance can plaque be controlled and diseases caused by plaque avoided: dental caries, gingivitis, and periodontitis. Oral cleanliness is important for the preservation of oral health as it removes microbial plaque, preventing it from accumulating on teeth and gingivae (3). Maintenance of effective plaque control is the cornerstone of any attempt to prevent and control periodontal disease. Supragingival plaque is exposed to saliva and the natural self-cleansing mechanisms that exist in the oral cavity. However, although such mechanisms may eliminate food debris, they do not adequately remo-

ve dental plaque. Therefore, regular personal oral hygiene is required for proper elimination of supragingival plaque (4). Dental caries is one of modern man's most common infectious diseases. With the arrival of modern times the nutrition has also changed, people eat unhealthier, sugary foods and with it the frequency of caries has also increased. Fats cover the tooth, reducing the retention of sugars and plaques; they can also have toxic effects on bacteria. Proteins increase the buffering capacity of saliva and have a protective effect on enamel. Together, fats and proteins raise the pH after carbohydrate intake. Another type of food would be those that, through chewing, stimulate salivary flow and, in this way, buffer the acid pH and favor the enamel remineralization" (5). Since oral cavity is the initial point of entry to the digestive and respiratory tract, it serves as a major entry point for infectious microorganisms. Over 700 bacterial species may be found in the oral cavity of humans (6). Oral microbial dysbiosis is linked to oral inflammation and may contribute to systemic conditions through bacteremia (7). Oral health education aims to avert diseases and put preventive measures in place. In order to control factors and avoid caries, preventive measures like: managing the bacterial flora in the mouth, educating people, fluoridating water, promoting healthy eating habits, and scheduling routine dental checkups are crucial (8,9). It is important to educate the parents of young patients on how to stop caries from developing, and it is advised to do so during the child's initial visit to the dental office. The

goal is to influence the child's systemic health in addition to their oral health by educating them about a proper diet that includes a higher proportion of nutrient-dense foods like fruit, vegetables, and meat and a lower proportion of refined carbohydrates. It is well known that children learn from their elders and imitate their behavior; therefore parents need to understand the importance of good oral hygiene and how it affects children's oral health (10). The first visit to the dentist should be around the 6th month of the child's life, when the first tooth erupts, at this age the child is unlikely to have caries, so there is no need for intervention, especially for those that cause pain and discomfort (11). To avoid going to the dentist only when a tooth hurts, prevention should begin early, in this way the child doesn't create a negative image of the procedure itself, because of that it is necessary to bring the child to the dental office to get used to the environment (12). This entails taking the child to the dentist once a month to gain experience working with instruments and a machine in their oral cavity and to build trust with the dentist. Toys and models with an upper and lower jaw and teeth are used to teach children how to properly brush their teeth. Different drawings of teeth in coloring books present teeth to children in a new and interesting way (13). In this way we try to avoid the development of fear in small patients and the objective is to establish a positive relationship with the doctor of dental medicine. During the first visit, it is necessary to discuss with the parents the importance of brushing their child's

teeth on a regular basis, the doctor will show the parents how to brush their child's teeth and discuss the child's diet. Parents should brush their kids' teeth until the age of 6 (14). Increased caution is needed when maintaining oral hygiene if the child is breastfeeding even after teething (15). Primarily, it is necessary to brush the teeth after breastfeeding, teeth should ideally be brushed after each meal and at least twice daily, after breakfast and before bed. When brushing your teeth, make sure to thoroughly clean all of the surfa-

ces (oral, vestibular and occlusal surfaces of the teeth), the tongue, which is a major collector of food residues, should also be brushed. Every time you brush your teeth, dental floss should also be used in addition to the brush. The majority of bacteria (80%) are found in soft tissues, the gingiva, and cheeks, with only 20% of them on the teeth. Research indicates that the typical amount of time spent brushing is 45 seconds, despite the recommendation to spend two minutes brushing twice daily (16). The goal of prevention in childhood

is to keep all teeth healthy in adulthood. There is a preventive procedure that the dentist can do on deciduous or permanent teeth of the young patients called fissure sealing. They will create a smoother surface to help avert food from getting stuck in the tiny grooves in the teeth and causing decay and cavities (17). In conclusion, due to all of the above, it is necessary to educate parents about the importance of a proper approach to oral hygiene as well as the eating habits of their children in order to improve the quality of life. 

LITERATURA

- World Health Organization. Oral health. [May;2017];<http://www.who.int/mediacentre/factsheets/fs318/en/>
- American Dental Association. ADA Policy - Definition of Oral Health. [May;2017]; <http://www.ada.org/en/about-the-ada/ada-positions-policies-and-statements/ada-policy-definition-of-oral-health>
- Choo A, Delac DM, Messer LB. Oral hygiene measures and promotion: review and considerations. *Aust Dent J* 2001; 46: 166–173.
- Van der Weijden GA, Hioe KP. A systematic review of the effectiveness of self-performed mechanical plaque removal in adults with gingivitis using a manual toothbrush. *J Clin Periodontol* 2005; 6: 214–228.
- Sociedad Española de Odontopediatría [(accessed on 4 June 2020)]; Available online: <https://www.odontologiapediatrica.com/protocolos/dieta-y-odontopediatria/>
- Paster BJ, Olsen I, Aas JA, Dewhirst FE. The breadth of bacterial diversity in the human periodontal pocket and other oral sites. *Periodontol.* 2006;2000(42):80–87.
- Han YW, Wang X. Mobile microbiome: oral bacteria in extra-oral infections and inflammation. *J Dent Res.* 2013;92:485–491.
- Recommendations for using fluoride to prevent and control dental caries in the United States. Centers for Disease Control and Prevention. *MMWR Recomm Rep.* 2001;50(RR-14):1-42.
- Soldani FA, Lamont T, Jones K, Young L, Walsh T, Lala R, Clarkson JE. One-to-one oral hygiene advice provided in a dental setting for oral health. *Cochrane Database Syst Rev.* 2018 Oct 31;10(10):CD007447. doi: 10.1002/14651858.CD007447.pub2. PMID: 30380139; PMCID: PMC6516798.
- Vanagas G, Milasauskiene Z, Grabauskas V, Mickeviciene A. Associations between parental skills and their attitudes toward importance to develop good oral hygiene skills in their children. *Medicina (Kaunas).* 2009;45(9):718-723.
- Sanguida A, Vinothini V, Prathima GS, Santhadevy A, Premal K, Kavitha M. Age and Reasons for First Dental Visit and Knowledge and Attitude of Parents Toward Dental Procedures for Puducherry Children Aged 0-9 years. *J Pharm Bioallied Sci.* 2019 May;11(Suppl 2):S413-S419. doi: 10.4103/JPBS.JPBS_54_19. PMID: 31198379; PMCID: PMC6555334.
- Appukkuttan DP. Strategies to manage patients with dental anxiety and dental phobia: literature review. *Clin Cosmet Investig Dent.* 2016 Mar 10;8:35-50. doi: 10.2147/CCIDE.S63626. PMID: 27022303; PMCID: PMC4790493.
- Deniz Done Akkaya, Emel Sezici, Teaching Preschool Children Correct Toothbrushing Habits Through Playful Learning Interventions: A Randomized Controlled Trial, *Journal of Pediatric Nursing*, Volume 56, 2021,Pages e70-e76, ISSN 0882-5963,<https://doi.org/10.1016/j.pedn.2020.08.001>.
- Pujar P, Subbareddy VV. Evaluation of the tooth brushing skills in children aged 6-12 years. *Eur Arch Paediatr Dent.* 2013;14(4):213-219. doi:10.1007/s40368-013-0046-3
- Branger B, Camelot F, Droz D, et al. Breastfeeding and early childhood caries. Review of the literature, recommendations, and prevention [published correction appears in *Arch Pediatr.* 2020 Apr;27(3):172]. *Arch Pediatr.* 2019;26(8):497-503. doi:10.1016/j.arcped.2019.10.004
- Creeth JE, Gallagher A, Sowinski J, et al. The effect of brushing time and dentifrice on dental plaque removal in vivo. *J Dent Hyg.* 2009;83(3):111-116.
- Naaman R, El-Housseiny AA, Alamoudi N. The Use of Pit and Fissure Sealants-A Literature Review. *Dent J (Basel).* 2017 Dec 11;5(4):34. doi: 10.3390/dj5040034. PMID: 29563440; PMCID: PMC5806970.