



## Dental and Oral Health

### OBJECTIVE

The objective of this Clinical Practice Guideline (CPG) is to provide evidence-based practice recommendations for Dental and Oral Health. The CPG outlines the organizations that WellCare aligns with regarding this topic and relevant Measureable Health Outcomes.

### OVERVIEW

Dental caries (cavities) is one of the most common, preventable childhood diseases. Regular dental visits provide access to cleaning, early diagnosis and treatment, as well as education about caring for teeth to prevent problems. Approximately 25 percent of the nation's children have nearly 80 percent of cavities, and tooth decay is the major cause of tooth loss in children. Each year, Americans make about 500 million visits to the dentist. In 2010, an estimated \$108 billion was spent on dental services for oral health problems. About 37,000 Americans will develop oral cavity or oropharyngeal cancer (cancers located in the tongue, tonsils and oropharynx, gums, lips, and mouth) in 2014, and 7,300 people will die of oral cancers. Dental diseases have a detrimental effect on quality of life in childhood and in older age. Annual dental visits and oral care during infancy and continued throughout childhood and adolescence can significantly reduce the risks of developing oral disease.<sup>1</sup> Please see the Addendum at the end of this CPG for additional information on fluoride, dental caries (cavities), use of sedation/general anesthesia, and considerations for children with special needs.

## Hierarchy of Support

### GUIDELINE HIERARCHY

CPGs are updated annually or as necessary due to updates made to guidelines or recommendations the American Dental Association (ADA), the American Academy of Pediatric Dentistry (AAPD), and the American Academy of Pediatrics (AAP). When there are differing opinions noted by national organizations, WellCare will default to the member's benefit structure as deemed by state contracts and Medicaid / Medicare regulations. If there is no specific language pertaining to Dental and Oral Health, WellCare will default (in order) to the following:

- National Committee for Quality Assurance (NCQA);
- United States Preventive Services Task Force (USPSTF), National Quality Strategy (NQS), Agency for Healthcare Research and Quality (AHRQ);
- Specialty associations, colleges, societies, etc. (e.g., American Academy of Family Physicians, American Congress of Obstetricians and Gynecologists, American Cancer Society, etc.).

Links to websites within the CPGs are provided for the convenience of Providers. Listings do not imply endorsement by WellCare of the information contained on these websites. NOTE: All links are current and accessible at the time of MPC approval.

WellCare aligns with the ADA, AAPD, and the AAP on the topic of dental and oral health. The following are highlights from their published positions, policies, and statements.

## AMERICAN DENTAL ASSOCIATION (ADA)

The American Dental Association (ADA) has published a series of items on the following topics:<sup>2</sup>

- Amalgam
- Anesthesia & Pain Control
- Antibiotic Prophylaxis (Infective Endocarditis)
- Cancers of the Oral Cavity & Oropharynx
- Dental Benefits and Claims Oral Health
- Dentistry
- Ethics
- Evidence-Based Dentistry
- Fluoride & Sealants
- Infection Control
- Lasers
- Medications
- Miscellaneous
- Oral Fluid Diagnostics
- Piercing & Tongue Splitting
- Radiography/X-Rays
- Substance Use Disorders
- Tobacco & Nicotine
- Tooth Whitening
- Unconventional Dentistry

To access the full version of ADA positions, policies, and statements, visit <http://www.ada.org/en/about-the-ada/ada-positions-policies-and-statements/>.

## AMERICAN ACADEMY OF PEDIATRIC DENTISTRY (AAPD)

The American Academy of Pediatric Dentistry (AAPD) recognizes the importance of infant oral health as being at the foundation upon which preventive education and dental care, and to enhance the opportunity for a lifetime free from preventable oral disease. The focus of the AAPD for parental and infant oral health includes: good home care and oral hygiene; fluoride use; sealants; limited snacking; and regular dental visits.<sup>3</sup> Highlights are noted below:

- **Establishment of a dental home** by 12 months of age. The initial visit should include thorough medical (infant) and dental (parent and infant) histories, a thorough oral examination, performance of an age-appropriate tooth brushing demonstration, and prophylaxis and fluoride varnish treatment if indicated. Providers can assess the infant's risk of developing caries and determining a prevention plan and interval for periodic re-evaluation should be done. Providing anticipatory guidance regarding dental and oral development, fluoride status, non-nutritive sucking habits, teething, injury prevention, oral hygiene instruction, and the effects of diet on the dentition are also important components of the initial visit.<sup>3</sup>
- **Routine professional care** can optimize oral health by removing active caries with subsequent restoration of remaining tooth structure. An **oral health risk assessment** should be given to all infants by six months of age; it should evaluate the risk of developing oral diseases of soft and hard tissues (including caries-risk assessment). Providers should also evaluate and optimize fluoride exposure. Referral for a comprehensive oral examination and treatment during pregnancy is especially important for the mother.<sup>3</sup>
- **Oral health education** should be provided by those serving parents and infants. Education should include the etiology and prevention of early childhood caries (ECC) as well as educating the parent on avoiding saliva-sharing behaviors (e.g., sharing spoons and other utensils, sharing cups, cleaning a dropped pacifier or toy with their mouth) can help prevent early colonization of Mutans Streptococci (MS) in infants.
- **Oral hygiene** should include brushing with fluoridated toothpaste and flossing by the parent. Both are important to help dislodge food and reduce bacterial plaque levels. For infants, oral hygiene measures should be implemented no later than the time of eruption of the first primary tooth. Tooth-brushing should be performed for children by a parent twice daily, using a soft toothbrush of age-appropriate size and the correct amount of fluoridated toothpaste. For children under age 3, use a smear or the size of a grain of rice; for children 3-6, use a pea sized amount of toothpaste.
- **Diet** plays an important role in oral health. Providers can educate parents on the cariogenicity of certain foods and beverages, role of frequency of consumption of these substances, and the demineralization / remineralization process. Evidence suggests that the use of xylitol chewing gum (at least two to three times a day by the mother) has a significant impact on mother-child transmission of MS and decreasing the child's caries rate. For children who are breastfed, research shows that human milk and breast-feeding of infants

provide general health, nutritional, developmental, psychological, social, economic, and environmental advantages while significantly decreasing risk for a large number of acute and chronic diseases. Human breast milk has not been epidemiologically associated with caries however breastfeeding greater than seven times daily after 12 months of age is associated with increased risk for ECC. Night time bottle feeding with juice, repeated use of a sippy or no-spill cup, and frequent in between meal consumption of sugar-containing snacks or drinks increase the risk of caries. The American Academy of Pediatrics recommends that children one through six years of age consume no more than four to six ounces of fruit juice per day, from a cup (e.g., not a bottle or covered cup) and as part of a meal or snack.

- **Teething** can lead to intermittent localized discomfort in the area of erupting primary teeth, irritability, and excessive salivation; however, many children have no apparent difficulties. Treatment of symptoms includes oral analgesics and chilled rings for the child to gum. Use of topical anesthetics, including over-the-counter teething gels, to relieve discomfort are discouraged due to potential toxicity of these products in infants.<sup>3</sup>
- **Non-nutritive oral habits** (e.g., digit or pacifier sucking, bruxism, abnormal tongue thrust) may apply forces to teeth and dentoalveolar structures. Providers should discuss early sucking and the need to wean infants from these habits before malocclusion or skeletal dysplasias occur.<sup>3</sup>
- Optimal exposure to **fluoride** is important to all dentate infants and children and its use for the prevention and control of caries is documented to be both safe and effective. The correct amount of fluoridated toothpaste should be used twice daily. (No more than a smear or rice-sized amount of fluoride toothpaste should be used for children under age three; no more than a pea-sized amount should be used for children ages three to six). Professionally-applied topical fluoride (or varnish) should be considered for children at risk for caries. Systemically-administered fluoride should be considered for all children at caries risk who drink fluoride deficient water (less than 0.6 ppm) after determining all other dietary sources of fluoride exposure.

For the entire guideline, visit [http://www.aapd.org/media/policies\\_guidelines/g\\_infantoralthcare.pdf](http://www.aapd.org/media/policies_guidelines/g_infantoralthcare.pdf).

#### AMERICAN ACADEMY OF PEDIATRICS (AAP)

The American Academy of Pediatrics (AAP) publication *Preventive Oral Health Intervention for Pediatricians* is a compilation of current concepts and scientific evidence required to understand and implement practice-based preventive oral health programs designed to improve oral health outcomes for all children and especially children at significant risk of dental decay. The AAP also reviewed cardiology and risk assessment of dental caries and defines appropriate recommendations for preventive oral health intervention by primary care pediatric practitioners:<sup>5</sup>

1. An oral health risk assessment should be administered periodically to all children.
2. Oral health risk-assessment training should be recommended for medical practitioners who are in training programs and those who currently administer care to children.
3. Dietary counseling for optimal oral health should be an intrinsic component of general health counseling.
4. Anticipatory guidance for oral health should be an integral part of comprehensive patient counseling.
5. Administration of all fluoride modalities should be based on an individual's caries risk. Patients who have a high risk of caries are candidates for consideration of more intensive fluoride exposure after dietary counseling and oral hygiene instruction as compared with patients with a lower risk of caries.
6. Supervised use of fluoride toothpaste is recommended for all children with teeth.
7. The application of fluoride varnish by the medical practitioner is appropriate for patients with significant risk of dental caries who are unable to establish a dental home.
8. Every child should have a dental home established after the first tooth erupts but no later than 1 year of age.
9. Collaborative relationships with local dentists may optimize the availability of a dental home.

Recommendations align with the oral health recommendations *Bright Futures: Guidelines for Health Supervision of Infants, Children, and Adolescents*, available at <https://brightfutures.aap.org/materials-and-tools/Pages/default.aspx>.

## Evidence Based Practice

### AGENCY FOR HEALTHCARE RESEARCH AND QUALITY (AHRQ)

The Agency for Healthcare Research and Quality (AHRQ) has not published reports on this topic.

### MEASUREMENT OF COMPLIANCE

WellCare is committed to adhering to the measures and standards published by the Centers for Medicare and Medicaid Services (CMS) and the National Committee for Quality Assurance (NCQA). Please reference WellCare's Clinical Policy Guiding Document titled *Quality Improvement*.

NOTE: To access Clinical Policy Guiding Documents visit [www.wellcare.com](http://www.wellcare.com) – select the Provider tab, then “Tools” and “Clinical Guidelines”.

## Care Management

The goals for Care Management are to support the member/caregiver's ability to self-manage their dental and oral health, minimize risks associated with poor dental and oral health, and remove barriers preventing them from achieving those goals. Integrated Care Management:

- Ensure the member/caregiver has dental provider who can provide timely follow up to monitor member's oral health by 12 months of age
- Ensure the member/caregiver attends scheduled dental appointments regularly to reduce risk of dental caries and other dental concerns
- Ensure the member/caregiver practices proper oral hygiene (brushing with fluoridated toothpaste and flossing)
- Ensure the member follows a healthy diet to reduce risk of dental caries
- Provide the caregiver education on management of teething, non-nutritive sucking (pacifiers, thumb sucking, abnormal tongue thrust)
- Provide education on optimal exposure to fluoride to prevent and control dental caries.

### MEASURABLE HEALTH OUTCOMES

Targeted Health Outcomes (Extended Program Goals) result from successful member/caregiver self-management (see Case Management Objectives).

- Adherence to proper oral health habits as evidenced by brushing/flossing twice daily with fluoridated toothpaste post engagement at 6-12 months. In absence of documentation, Provider and/or member/caregiver narrative/HRA data may be used
- Member has a reduction in dental caries by 12 months post-engagement. In absence of documentation, Provider and/or member/caregiver narrative/HRA data may be used.
- Member has a reduction in use of non-nutritive sucking (pacifier, thumb sucking, etc) by 12 months post-engagement. In absence of documentation, Provider and/or member/caregiver narrative/HRA data may be used.

### CASE MANAGEMENT GOALS

Case Goals should target specific care gaps and/or adherence issues, and measure the member's progress towards self-management and adherence which will lead to the targeted health outcomes above. Examples:

- Member will obtain and attend dental (or pediatrician) appointments as scheduled by provider within 60 days to assess for oral/dental health
- Member will be adherent to oral health regimen as evidenced by caregiver report over last 30 days
- Member will be able to decrease use of pacifier and/or thumb sucking at one time / day over the next 30 days
- Specific for Members requiring hospitalization: The Member participates in provider follow-up visit within 7 days of hospital discharge

### CASE MANAGEMENT OBJECTIVES

Case Management Objectives should focus on improving the Member's self-management skills up to and including:

- Addressing barriers to oral health hygiene adherence

- Assisting with scheduling provider appointments or obtaining specialist referrals
- Providing education on oral hygiene and importance of compliance in reducing dental caries
- Providing education on importance of reduction of non-nutritive sucking
- Providing education on foods and beverages that increase incidence of dental caries (sodas, fruit juices, acidic foods, high sugar snacks, etc)

**MEMBER EDUCATIONAL RESOURCES**

Currently there are no Krames/StayWell Member educational materials utilized by WellCare Case Managers.

**Related WellCare Guidelines**

In addition to the information contained in this document, please reference the following CPGs: *Pediatric Preventive Health (HS-1019)*.

NOTE: Clinical Policies can be accessed by going to [www.wellcare.com](http://www.wellcare.com) – select the Provider tab, then “Tools” and “Clinical Guidelines”.

**References**

1. Annual dental visits. National Committee for Quality Assurance (NCQA) Web site. <http://www.ncqa.org/report-cards/health-plans/state-of-health-care-quality/2017-table-of-contents/dental>. Published 2017. Accessed June 27, 2018.
2. ADA positions, policies, and statements. American Dental Association Web site. <http://www.ada.org/en/about-the-ada/ada-positions-policies-and-statements/>. Accessed June 27, 2018.
3. American Academy of Pediatric Dentistry. Guideline on infant oral health. *Pediatr Dent*. 2014;37(6):146-150. [http://www.aapd.org/media/Policies\\_Guidelines/G\\_InfantOralHealthCare.pdf](http://www.aapd.org/media/Policies_Guidelines/G_InfantOralHealthCare.pdf). Revised 2014. Accessed June 27, 2018.
4. Fast facts. American Academy of Pediatric Dentistry Web site. <http://www.aapd.org/assets/1/7/FastFacts.pdf#xml>. Published 2014. Accessed June 27, 2018.
5. Preventive oral health intervention for pediatricians. American Academy of Pediatrics Web site. <http://pediatrics.aappublications.org/content/122/6/1387>. Published December 2008. Accessed June 27, 2018.
6. Pediatric At-A-Glance Guide. WellCare Web site. <https://www.wellcare.com/en/Florida/Providers/Medicaid/Quality>. Accessed June 27, 2018.

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*Easy Choice Health Plan ~ Harmony Health Plan of Illinois ~ Missouri Care ~ Ohana Health Plan, a plan offered by WellCare Health Insurance of Arizona OneCare (Care1st Health Plan Arizona, Inc.) ~ Staywell of Florida ~ WellCare Prescription Insurance ~ WellCare Texan Plus (Medicare – Dallas and Houston markets) WellCare (Arizona, Arkansas, Connecticut, Florida, Georgia, Illinois, Kentucky, Louisiana, Mississippi, Nebraska, New Jersey, New York, South Carolina, Tennessee, Texas)*

**Medical Policy Committee Approval History**

Date	History and Revisions by the Medical Policy Committee
7/12/2018	• Approved by MPC. No changes.
10/5/2017	• Approved by MPC. Updated on new template, including the Care Management section.
08/19/2016	• Approved by MPC. New.

**Addendum**

**FLUORIDE**

Fluoride is a compound that contains fluorine, a natural element. Using small amounts of fluoride on a routine basis helps to prevent tooth decay. Fluoride encourages "remineralization," a strengthening of weakened areas of tooth enamel. It also affects bacteria that cause cavities, discouraging acid attacks that break down the tooth. Fluoride can occur naturally in water but is often added to community water supplies. It is found in many different foods and in dental products such as toothpaste, mouth rinses, gels and varnish. Fluoride is most effective when combined with a

healthy diet and good oral hygiene.<sup>4</sup>

Systemic fluoride has been shown to reduce caries between 50-70%. Water fluoridation is still the most cost effective way to prevent tooth decay. However, 30% of communities in the United States do not have fluoride in their public sources of water. Children aged 6 months to 16 years may need fluoride supplements if they drink water that is not optimally fluoridated. Fluoride sources for children include fluoride toothpastes, fluoride mouth rinses and fluoride applications in the pediatric dental office. Using a fluoridated toothpaste and rinsing with an alcohol-free, over-the-counter mouth rinse containing 0.05 percent sodium fluoride once a day or 0.02 percent sodium fluoride rinse twice a day have been suggested to help reduce plaque levels and promote enamel remineralization.<sup>3</sup> Ingesting too much fluoride can cause fluorosis of the developing teeth. Fluorosis usually is mild, with tiny white specks or streaks that often are unnoticeable. Three common ways a child can get too much fluoride are:

1. Taking more of a fluoride supplement than the amount prescribed.<sup>4</sup>
2. Taking a fluoride supplement when there is already an optimal amount of fluoride in the drinking water.
3. Using too much toothpaste, then swallowing it instead of spitting it out.

To avoid having too much fluoride, you need to establish the fluoride content of your child's primary drinking water source, as well as other sources of fluoride. Common everyday sources include the kitchen faucet (everyday use for cooking and drinking), the school drinking fountain, and bottle water. Parents should supervise their preschoolers' tooth brushing. Use a small smear or rice-sized amount of fluoridated toothpaste for children under three-years-old. For those aged 3 to 6 years, use no more than a pea-sized amount of fluoridated toothpaste when helping your children brush.<sup>4</sup>

## DENTAL CARIES (CAVITIES)

Approximately 25% of American children have nearly 80% percent of dental caries (DC). Children most at-risk include recent immigrants to the United States; those living in non-fluoridated communities; those from impoverished families; and children with special health care needs (e.g., chronically ill, homebound, physically impaired or developmentally disabled). Over 30% of children age three to five have cavities in baby teeth; tooth decay is still the major cause of tooth loss in children. Approximately 51.6 million school hours were missed annually by school-aged children due to a dental problem or visit (average of 117 hours missed per 100 children). Water fluoridation is still the most beneficial and inexpensive way to prevent tooth decay. However, 30 percent of American communities do not have access to fluoridated water through their public water supplies.<sup>4</sup>

The AAPD has appointed a Child Advocate and a Congressional Liaison to promote increased access to quality oral health care for all children by working with Congress, government agencies, and other child advocacy organizations. In addition, state-level pediatric dental organizations work to bring dental care to children in need. The greatest impact on access to oral health care for those in need comes from individual pediatric dentists providing free care in their own practices or in the hundreds of clinics, institutions, and public programs throughout the country. Pediatric dentists donate an estimated \$6 million in free dental care each year.<sup>4</sup>

### Treatment Options

Three main options exist to treat a cavity and remove the decayed part of the tooth: the traditional dental "drill", micro-abrasion, and laser treatment. Once the decay is removed, the next step is filling the hole where the decay was. While baby teeth do eventually come out, it is also true that they are important to a child in the meantime. Primary or baby teeth hold space for the permanent teeth to grow in. If one is lost, the others can shift into the empty space and prevent the permanent tooth from erupting. A decayed tooth can become abscessed and cause discomfort for a child. Left untreated, dental caries can result in a broad range of functional impairments that have far-reaching implications for growth, development, school performance, and peer relationships.<sup>4</sup>

### Sealants and Amalgams

Pit and fissure decay accounts for 80- 90% of cavities in permanent back teeth and 44% in baby teeth. Since these are the areas that sealants protect, it is easy to see why sealants benefit children. Sealants are made of clear or shaded plastic and protect the chewing surfaces of back teeth, as well as surfaces of other teeth that may have pits or grooves. Even with diligent brushing and flossing, it is almost impossible to clean the deep pits and valleys on back

teeth. Food and bacteria build up in these narrow grooves and pits, placing a child in danger of tooth decay. Sealants help keep out bacteria and sugars that lead to decay. A pediatric dentist applies sealants by drying and conditioning the tooth, “painting” it on, and allowing it to harden. Sealants cost less than half of what a filling costs, a good value in view of the decay protection offered during periods of greatest risk. Placement in children and adolescents has shown a reduction of cavities incidence of 86% after one year and 58% after four years. With appropriate follow-up care, the success rate of sealants may be 80-90% even after a decade. The teeth most at risk of decay and most in need of sealants are the six-year and twelve-year molars. Teeth are at greatest risk of decay when they first erupt into the mouth. The sooner the sealant is applied, the better.<sup>4</sup>

Amalgams, the silver-colored fillings you probably got as a child, are still serving children well today. Amalgam fillings are made of a mixture of metals including silver, copper, tin, and mercury. Their relative low cost, ease of placement, and durability contribute to their continued use. However, amalgam fillings require removal of healthy tooth structure in order to achieve adequate retention. Because they lack the aesthetic appeal of composite resins, their use is limited to back teeth with small to moderate sized cavities. Used for over 100 years, amalgam fillings have been proven safe with patients all over the world. Allergic reactions are rare however there are alternative filling materials. Amalgam fillings should not be used in primary molars where decay is extensive or for patients who are at high risk for decay and have multiple and/or large cavities.<sup>4</sup>

## **SPECIAL CONSIDERATIONS**

### **Children with Special Needs**

Children with disabilities have more oral health problems than children without disabilities. For example, almost all developmentally disabled persons are likely to have moderate or severe gum disease; children with cerebral palsy are more likely to have missing teeth than children without the condition. Many parents have difficulty finding dental care for their children with special needs. Pediatric dentists are an excellent resource for these parents because of their specialized training in children and individuals with special health care needs.<sup>4</sup>

### **Sedation and General Anesthesia**

Sedation uses medications for the child’s safety and comfort during dental treatment. Sedation can help increase cooperation and reduce anxiety and/or discomfort associated with dental procedures. Sedation may prevent injury by helping a child stay still around the sharp or fast-moving instruments needed for treatment. A medication and dosage is used dependent upon the child’s overall health, level of anxiety, and dental treatment recommendations. It is not intended to cause a loss of consciousness and the child is able to respond to touch or voices. Sedation is recommended for apprehensive children, very young children and children with special health care needs who would not be able to receive necessary dental care in a safe and comfortable manner without it. Sedation is safe for children when administered as recommended by the AAPD. Parents should be encouraged to discuss concerns with the Provider about types of medications and sedation options, as well as the special monitoring equipment.<sup>4</sup>

General anesthesia is an induced state of unconsciousness; the patient is asleep and unable to respond to touch or voices. It is often recommended for children with extensive dental needs who cannot tolerate the treatment required to restore their oral health. It may also be used for a child with a mental or physical disability for whom a hospital setting provides the safest and best approach to care. It should be noted that children face the same risk under general anesthesia for dental treatment as for any other surgical procedure. The treatment should be provided only by highly qualified health professionals, including pediatric dentists with advanced education in anesthesiology, dental or medical anesthesiologists, oral surgeons, and certified registered nurse anesthetists. Whether the treatment is provided in a pediatric dental office or a hospital, it should feature special monitoring and emergency equipment and trained support personnel. Parents should talk openly with the Provider about the benefits and risks.<sup>4</sup>

## **MEMBER EDUCATION**

Providers should aim to do the following when caring for children and adolescents:<sup>4</sup>

1. Establish communication.
2. Alleviate fear and anxiety
3. Deliver quality dental care

4. Build a trusting relationship between dentist and child
5. Promote the child's positive attitude toward oral/dental health and oral health care.

In addition, providers should educate new parents on the following:<sup>4</sup>

- Before the teeth erupt, clean the baby's mouth and gums with a soft cloth or infant toothbrush at bath time. This helps ready the baby for the teeth cleaning to come. When the teeth erupt, clean the child's teeth at least twice a day with a toothbrush designed for small children.
- Take the baby to see a pediatric dentist by the baby's first birthday. The earlier the visit, the better. It is important to establish a dental home to ensure that the child's oral health care is delivered in a comprehensive, ongoing, accessible, coordinated and family-centered way by the dentist.
- If the baby is placed to sleep with a bottle, use nothing but water. When a child is given a bottle containing sugary liquids such as milk, formula or fruit juice, the teeth are under attack by bacterial acid for extended periods. This can cause "early childhood caries," formerly known as baby bottle tooth decay. Wean the infant from the bottle by one year of age.
- Breast-feeding has been shown to be beneficial for a baby's health and development. However, if the child prefers to be breast-fed often or for long periods once a tooth appears and other foods/beverages have been introduced into her diet, she is at risk for severe tooth decay. Clean the baby's mouth with a wet washcloth after breast-feeding, and encourage a bottle with plain water during the nighttime.

#### **Diet<sup>4</sup>**

Children's dental health depends less on what they eat and more on how often they eat it. About 90 percent of all foods contain sugars or starches that enable bacteria in dental plaque to produce acids. This attack by bacterial acid, lasting 20 minutes or more, can lead to loss of tooth mineral and to cavities. Acids present in carbonated beverages can have a greater negative effect (i.e., erosion) on enamel than the acids produced by bacteria from the sugars present in sweetened drinks. Sugars are essentially the same, whether natural or processed, to cavity-causing bacteria in the mouth. All types of sugars and the foods that contain them can play a role in tooth decay. A child who licks a piece of hard candy every few minutes to make it last longer or slowly sips a sugared drink while studying, is flirting with a high risk of tooth decay. Such long-lasting snacks create an acid attack on teeth for the entire time they are in the mouth.

Cooked starches (fermentable carbohydrates) can lead to cavities just as sugars can. In fact, such cooked starches as breads, crackers, pasta, pretzels and potato chips frequently take longer to clear the mouth than sugars. So the decay risk may last even longer. A food with sugar or starch is safer for teeth if it is eaten with a meal, not as a snack. Finally, certain cheeses (e.g., aged cheddar, Swiss, mozzarella and Monterey jack) have been shown to have characteristics that disrupt the development of cavities when eaten alone as a snack or at the end of a meal. The cheese stimulates the flow of saliva, clearing the mouth of food debris and acting as a buffer to neutralize the acids that attack teeth. The calcium and phosphorous found in cheese also reduce or prevent decreases in pH levels of saliva and promote remineralization of tooth enamel.

#### **Thumb Sucking and Pacifiers<sup>4</sup>**

Babies suck even when they are not hungry (a natural reflex called non-nutritive sucking) for pleasure, comfort and security. In the pacifier-versus-thumb debate, the AAPD votes for pacifiers over thumbs to comfort new babies. A pacifier habit is easier to break at an earlier age; the earlier a sucking habit is stopped, the less chance the habit will lead to orthodontic problems. Sucking on a thumb, finger, or pacifier is normal for infants and young children; most children stop on their own. If a child does not stop by herself, the habit should be discouraged after age three. Thumb, finger and pacifier sucking all can affect the teeth essentially the same way. If a child repeatedly sucks on a finger, pacifier or other object over long periods of time, the upper front teeth may tip outward or not come in properly. Other changes in tooth position and jaw alignment also may occur. Some oral changes caused by sucking habits continue even after the habit stops. Prolonged sucking can create crooked teeth or bite problems. Early dental visits provide parents with information to help their children stop sucking habits before they affect the developing

permanent dentition. Additional tips for the use of pacifiers:

- Never dip the pacifier into honey or anything sweet before giving it to a baby.
- Never attach a pacifier to the child's crib or body with a string, ribbon or cord.
- A pacifier's shield should be wider than the child's mouth; discontinue use if it fits in the child's mouth.
- Inspect pacifiers frequently for signs of wear; discard if the bulb has become sticky, swollen, or cracked.
- Never leave an infant unattended with a pacifier in her mouth, or let her sleep with a pacifier.
- Never substitute a bottle nipple for a pacifier.

#### **Brushing Tips**<sup>4</sup>

Toddlers can and should be encouraged to help brush their teeth as soon as they can hold a brush. Parents should brush preschoolers' teeth and supervise the brushing for school-age children until they are 7 to 8 years of age (about the same time they can tie their own shoelaces or write in cursive). A toothbrush designed for children's smaller hands and mouths should be used; look for large handles that help children control the toothbrush. The best toothbrushes have soft, round-ended (polished) bristles that clean while being gentle on the gums. Brushes should be replaced after 3 months (or sooner if the bristles are fraying). Frayed bristles can harm the gums and are not as effective in cleaning teeth.

The best times to brush are after breakfast and before bed. A toothpaste with fluoride and labeled with the ADA Seal of Acceptance should be used. Young children, especially preschool-aged children, should not swallow any toothpaste; careful supervision is encouraged. For children under 3-years-old, use a smear or rice-sized amount of fluoridated toothpaste. For those 3 to 6 years old, nor more than a pea-sized amount of fluoridated toothpaste on the brush is recommended. Ingesting too much fluoride can cause fluorosis of the developing teeth. Fluorosis usually is mild with tiny white specks or streaks that often are unnoticeable. When all sides of a tooth cannot be cleaned by brushing alone, it is time to begin flossing the child's teeth.