

The first dental visit

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The recommended age for the first dental visit seems to vary among and within the professions. Unfortunately, the first visit often is prompted by clinical caries or dental trauma. The purpose of this paper is to provide guidelines for examining the toddler and information to be offered to parents during the consultation. Early identification and intervention for children with high caries risk, education of other health professionals and parents with preventive strategies, and the establishment of a relationship with a dentist prior to a traumatic injury should be mutual goals.

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New patients are welcome in nearly every practice but often not before three years of age. How does one examine a toddler? After all, just how much can be said about 6–16 primary teeth? This article describes the toddler's examination and provides recommendations for information to be included in the consultation. Additional advice and facts that may pertain to younger siblings also are discussed.

Recommendations for the timing of the first visit vary. The American Academy of Pediatric Dentistry and Academy of General Dentistry recommend within six months of the eruption of the first tooth and no later than 12 months of age, while the American Academy of Pediatrics recommends by age three or sooner if there is a need. Unfortunately, in most cases, the need is not perceived by the parents until gross decay or abscess has occurred. Dentists must educate physicians regarding the need for a dental examination to

be performed no later than 24 months of age. In lower socioeconomic populations or in communities with a high incidence of caries in the primary dentition, particularly baby bottle tooth decay, the examination and parental education must occur no later than 12 months of age.

The National Institute of Dental Research reports that 80% of decay occurs in only 25% of children.¹ Caries risk assessment is one of the most important goals of this initial examination. Rampant caries may be present by three years of age, predisposing the toddler to high caries rates in the permanent dentition.² Many dentists in pediatric practices have seen little decline in caries in the primary dentition. In fact, nearly half of the three-year-olds seen for a first dental examination in the author's practice have one or more carious lesions.

Fluoride passes the placental barrier in only trace amounts, so the developing primary dentition derives little benefit. The

enamel on the primary tooth is very thin compared to the permanent tooth and caries progression is more rapid. Preventive measures and parental education must be initiated earlier than three years of age.

The examination

Schedule the toddler as early in the day as possible. Avoid nap time. Parents should be advised not to communicate any of their fears to the child. A favorite toy or blanket may accompany the child.

A home routine of daily brushing will make the first visit go much better. If the child has never had a toothbrush in his or her mouth, the examination may be more difficult. Have the parent practice with the child's head on his or her lap, brushing the teeth in a position similar to the one in which the examination will take place.

The oral cavity of a pediatric patient changes, sometimes markedly, from one visit to the next. A comprehensive examination is necessary not only for thoroughness but also for comparison. Because dental records may be requested for a missing child, they should accurately reflect the developmental status of the dentition, occlusion, and soft tissues.

There are various positions to facilitate the toddler's examination. In the knee-to-knee position, the parent and dentist sit facing each other. The parent holds the child's hands and feet (if necessary) as the dentist examines the child (Fig. 1). The child may sit on the parent's lap. If the hands and feet are flailing, the parent wraps a leg around the child's legs and holds the child's hands (Fig. 2).

A comprehensive examination should be performed in the same manner with each child. Conversation with the parent during the examination should be limited in order to make the time the toddler must sit still as brief as possible. The parent should be present. Occlusal discrepancies, pathology, poor oral hygiene, caries, or any areas of concern may be shown to the parent at this time. Detailed comments should be reserved for the consultation. The examination should include evaluation and recording of the following factors.



Fig. 1. Knee-to-knee examination.



Fig. 2. Parental assistance with an uncooperative child.



Fig. 3. Facial asymmetry due to posterior crossbite.



Fig. 4. Hemangioma.



Fig. 5. Low thick maxillary frenum.



Fig. 6. Measuring overjet.



Fig. 7. One hundred percent overbite.



Fig. 8. Anterior open bite.

Facial symmetry

It is important to have a baseline evaluation. Facial asymmetry is not an uncommon finding. This may be a valuable notation to have on record in order to rule out soft tissue injury in a child who has unilateral fullness after facial trauma. A unilateral posterior crossbite also may create this appearance (Fig. 3).

Temporomandibular joint

It also is helpful to note a baseline of crepitus or a “pop” for comparison in the event of trauma.

Soft tissue profile

This should be noted as convex, concave, or straight.

Anomalies/pathology

Findings such as geographic tongue, bifid uvula, lip pits, parulus, aphthous ulcer, eruption hematoma, hemangioma (Fig. 4), supernumerary, geminated, or fused teeth should be noted. Preauricular, posterior auricular, superficial cervical, submental, and submandibular lymph nodes and the thyroid gland should be palpated. It should be noted if the tonsils are “kissing” or if they appear to be excessively enlarged. A high vaulted palate, enlarged tonsils, a

constricted maxilla, or a history of snoring may indicate upper airway obstruction. All salivary glands should be palpated. A bifid uvula should be noted along with palpation to rule out a submucous cleft.

Soft tissue

Findings such as ankyloglossia or low thick maxillary frenum (Fig. 5), high labial frenum attachment with pull in the mandibular anterior, and gingival recession should be noted. The tongue is examined in the same manner as in the adult.

Overjet

The distance of the incisal edge of the maxillary incisors from the facial surface of the mandibular incisors should be measured in millimeters. A measurement from 1.0–3.0 mm is within normal limits. An overjet greater than 3.0 mm predisposes to incisor fracture with trauma. This also is an important record to have to compare with the posttrauma overjet (Fig. 6).

Overbite

The amount the maxillary incisors overlap the mandibular incisors should be measured. A measurement of 100% is normal prior to the eruption of the second primary molars and may continue to be with-

in normal limits until the first permanent molars erupt (Fig. 7). A negative number denotes an open bite. Open bites usually are the result of pacifier use or non-nutritive sucking (Fig. 8). Comparison of the overjet and overbite prior to cessation of a pacifier habit may be of great interest to the parents. They can clearly see how the pacifier affected the bite and are much less likely to permit continuation past two years of age in any younger siblings.

Occlusion

The relationship of the canine and second primary molar (if erupted) should be noted. For ideal occlusion, the canine relationship should be Class I. The second primary molar should be edge-to-edge. The occlusal relationship of the permanent dentition may be predicted fairly accurately by the canine relationship. A Class I canine most likely will result in a Class I occlusion (Fig. 9). An edge-to-edge canine relationship likely will become a Class II occlusion in the permanent dentition (Fig. 10). Non-nutritive sucking habits have been reported to enhance the development of a Class II occlusion.³ A Class III primary canine relationship with an anterior crossbite provides a less accurate prediction for occlusion in the permanent



Fig. 9. Class I canine.



Fig. 10. Edge-to-edge canine.



Fig. 11. Class III canine.



Fig. 12. No interdental spacing.



Fig. 13. Anterior crossbite.



Fig. 14. Bilateral posterior crossbite.



Fig. 15. Unilateral posterior crossbite.

dentition due to a pseudo-Class III that may be the result of a repositioned mandible (Fig. 11). Interdental spacing or the lack thereof also should be recorded (Fig. 12). An edge-to-edge canine relationship and a lack of interdental spacing may provide a prediction regarding the need for future orthodontic treatment by 18 months of age.

Crossbite

This may be a single tooth, anterior (Fig. 13), bilateral posterior (Fig. 14), unilateral posterior (Fig. 15), or functional. Posterior crossbites most often are created by prolonged pacifier habits. Functional crossbites occur when the maxillary arch is constricted to the point that the primary canines are in traumatic occlusion. To determine if this is the case, place the child's mandible in the centric position. The primary canines will be the only teeth in occlusion and the posterior segments will not be in frank crossbite. A functional crossbite may be corrected (on a cooperative child) by reducing the primary canines using a diamond bur until their incisal edges are no longer in contact.

Status of the developing dentition

All teeth should be charted as being either erupted, partially erupted, or unerupted.

Morphology and status of the enamel

Hypoplasia (pitted defects), hypocalcification (white spots or striations), deep pits and fissures, and accessory cusps should be noted.

Caries

Presence or absence should be noted.

Behavior

Stranger scares or difficulty in separating from parents still may be appropriate behavior at age two. Behavior may be termed as *normal for age*, *fearful*, or *excellent*. Stubborn, defiant, or hysterical behaviors would be identified more appropriately in an older child.

The consultation

The consultation with the parent will occupy the majority of the appointment. This is the time when any areas of concern noted during the examination are

addressed and general information regarding the toddler's oral health and preventive measures are discussed. The child's medical history, including the status of immunizations and the prenatal history, is obtained and reviewed prior to the examination. The caries risk assessment is determined and shared with the parent after the examination. Again, especially for ages two and under, the examination should be performed as quickly as possible and conversation with the parent should be reserved for the consultation. The information below may be useful to include during the consultation.

Tooth formation

Primary teeth begin to form at approximately six weeks *in utero* and calcification is completed at approximately 20 weeks. Unlike the permanent teeth that develop within the bone, primary teeth lie just under the gingiva. A white spot lesion may be present on the facial surface of a primary canine. This may be the result of a minor trauma prior to the eruption of the tooth. Only the gingiva protects the young enamel of the convex primary canines. The 20 primary teeth are important to maintain space for the permanent teeth that will replace them. The order of tooth loss and the anticipated age for the first tooth to be lost may be determined by the age when the first primary tooth erupted. Dental age and chronological age may not be the same. Heredity generally will dictate the timing of exfoliation and eruption.

Maternal oral health may have an effect on the developing fetus. Preterm births and low birth weight have been linked to maternal periodontal disease.^{4,5} Mothers who are highly infected with *Streptococcus mutans* are known to transfer the bacteria to their infants via infected saliva.⁶ Infants and toddlers are infected with *S. mutans* during a well-delineated period of time known as the *window of infectivity*. It begins as young as 10 months of age and has a median age of 26 months.⁷ This vertical transmission occurs primarily by kissing, blowing on or tasting the infant's food, and sharing utensils. The practice of cleaning the pacifier by placing it in the parent's mouth should be avoided.

Teething usually occurs from 6–36 months. The parent should be asked when the first primary tooth erupted. This may vary considerably based on the

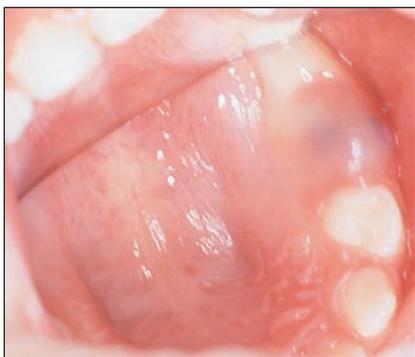


Fig. 16. Eruption hematoma.

parent's teething history. Fever, diarrhea, rash, ear tugging, or signs of any infection should never be attributed to teething. This assumption may delay necessary medical treatment. Maternal antibodies are diminishing by six months of age and the infant is more susceptible to infection at this time. Drooling, sucking on hands or blankets, changes in sleep or feeding habits, and some irritability may occur. Drooling at three to four months may not be a consequence of teething but of normal onset of salivary gland activity. This activity is at its maximum just before tooth eruption and the infant may not yet have the ability to swallow all of the saliva that is being produced. Plastic teething rings should be avoided. A clean, cold, damp washcloth or cooled (not frozen) rubber teething ring may be offered. Massaging the child's gums with a clean finger can be soothing. Eruption hematomas should be described (Fig. 16). The usual order of eruption of the primary dentition is shown in the table. Charts listing the average ages and sequence of eruption may be given to parents.

Diet

A dietary history should be obtained. Foods eaten most often as snacks should be recorded. Retention of food residues on primary molars persisting beyond 20 minutes is one guideline to use for snack choices. All food residues should be completely cleared within 20 minutes to avoid a more prolonged lowering of the oral pH. Raisins and plain chocolate will clear within one minute. Starchy snacks such as crackers, chips, and cookies should be avoided. Ingestion of salty meals in early childhood also has been linked to increased caries risk.⁸

Table. Order of eruption of the primary dentition.

Teeth	Age (months)
Mandibular primary central incisors	5–7
Maxillary primary central incisors	6–8
Maxillary primary lateral incisors	9–12
Mandibular primary lateral incisors	10–12
Maxillary and mandibular first primary molars	12–16
Maxillary and mandibular primary canines	16–20
Maxillary and mandibular second primary molars	20–36

The use of the bottle and infant feeding cup (sippie cup) should be discussed. In one study, 60% of parents interviewed denied any knowledge of the detrimental effects of inappropriate use of the baby bottle. Forty percent were aware of the harmful results but continued the inappropriate use anyway.⁹ Many studies have found that education efforts have proved to be of no avail but the efforts must continue for those who may heed the advice. Use of the bottle should be discontinued by one year of age. Inappropriate use of the sippie cup can be just as detrimental as the baby bottle. Parents should be advised of the cariogenicity of juices and soft drinks. Sweetened beverages can increase the colonization of *S. mutans* fourfold compared to milk.¹⁰ Soft drinks have the additional dangers of phosphoric, citric, and carbonic acids. Habits such as swishing or holding sweetened beverages in the mouth should be identified and discontinued.

Late bottle weaning has been shown to be related to the mother's return to work.¹¹ Prolonged breastfeeding and breastfeeding ad lib throughout the night as the child sleeps at the mother's side also can have a significant effect on the incidence of caries.^{12–14} Children who are breast-fed beyond 18 months are at higher risk for caries because they have a greater food intake than those who are not breast-fed.¹⁵

Each of the food groups should be discussed in the interview with the parent. Vegetables and meats are likely to be low on the list of "likes" in the toddler. Most pediatricians usually do not recommend the use of a vitamin supplement after one year of age but if a vitamin supplement is being given to the child, the brand should be recorded. Advise par-

ents that chewable vitamins with sugar listed as the first ingredient on the label should be substituted with a different brand. Vitamins containing iron may cause staining of the fissures and grooves of the primary molars and this could be mistaken for caries.

Medication

Medications for the toddler will be in a suspension form and the sugar and dye may cause extrinsic staining. This staining may be a reason for the first visit. Pediatric oral suspensions are 40–70% sugar to make them more palatable. An increase in caries in the primary dentition may result from chronic use of antibiotics but there should be no direct effect on the developing permanent teeth. Tetracycline is the only antibiotic that may affect the developing permanent teeth, possibly causing dark intrinsic staining. The use of tetracycline prior to age eight has been completely discouraged.

Parents should be advised of the need for a thorough brushing after the bedtime dose of antibiotic. The cheeks and tongue also should be wiped clean. Extrinsic staining may occur on the mandibular incisors from residual antibiotic suspension in the saliva that pools in this area during the night. Instruct parents to retract the lower lip and brush the primary mandibular incisors along with the other teeth (Fig. 17). Toothbrushes should be replaced at the completion of the antibiotic, particularly in cases of group A beta-hemolytic streptococci. Studies have shown that group A beta-hemolytic streptococci grows on toothbrushes and causes reinfection.¹⁶ The colony counts of the bacteria are reduced enough for the child to no longer be contagious after the first 24 hours of antibiotic therapy. The



Fig. 17. Brushing the mandibular incisors.



Fig. 18. Malocclusion from pacifier use.

original toothbrush is teeming with bacteria and also should be replaced after the first 24 hours. An inexpensive toothbrush can be purchased for use after the first toothbrush is discarded until completion of the antibiotic. If a child is being seen by the dentist after the first 24 hours of antibiotic therapy, some disposable toothbrushes might be offered for use until the antibiotic is completed. Toothpaste should be placed on the brush via a cotton swab or a clean finger in order to avoid contaminating the toothpaste tube.

Fluorosis

Fluoride and risk factors for fluorosis such as toothpaste consumption, the use of powdered infant formulas, and improper prescribing of fluoride supplements should be discussed.¹⁷ Reconstituting powdered infant formulas with fluoridated water has been shown to contribute significantly to fluorosis.¹⁸ Ready-to-feed formula or using a bottled water that contains no fluoride would be the better choice for an infant. (There is no risk of fluorosis after seven years of age.) Is the home water supply fluoridated? Has the pediatrician prescribed fluoride supplements? If the home water supply is well water, the fluoride content of the well water should be obtained. Water samples may be taken to a local laboratory or a sample may be sent in a plastic container to FluoriCheck (Omni Oral Pharmaceuticals, West Palm Beach, FL; 800/445-3386) for analysis. Home water purification units will vary in terms of fluoride removal depending on the manufacturer and the age or efficacy of the unit. This water also should be evaluated for fluoride content before fluoride is prescribed. Bottled water, soft drinks, tea, and juices, especially white grape juice with 1.45 ppm fluoride, may provide enough fluoride without further supple-

mentation.¹⁹⁻²¹ Daycare or caretakers' homes may provide fluoridated water.

The permanent maxillary incisors are in the maturation phase of enamel formation (the stage when fluoride is incorporated into the developing enamel) during the second year of life. There is a continued risk of fluorosis for up to 36 months beyond this time.²² Toothpaste contains 1,000 ppm fluoride. A portion of toothpaste the size of a match head may be used for brushing beginning at age two. Using a transverse method instead of the conventional method to dispense the toothpaste onto the bristles of the toothbrush may be suggested to parents.²³ One study states that ingestion of fluoride prior to three years of age is not necessary to ensure maximum protection against caries; however, fluorosis can be reduced significantly if this practice ceases.²⁴ If supplementation is deemed to be necessary, the many dietary sources of fluoride and their halo effect must be considered. Waiting until five or six years of age to begin supplementation for a caries-free child whose caries risk assessment is low, considering the stage of the developing enamel for the maxillary permanent incisors, may be better timing. If the child has caries or is deemed to be a high caries risk and a supplement is prescribed before five or six years of age, parents should be informed of the risk of fluorosis. By age two, any supplements prescribed should be in the form of chewable tablets and liquid/vitamin combinations should be discouraged. Vitamins are best absorbed and utilized with a meal and fluoride is best taken at bedtime. Parents should be advised to keep fluoride and mouthwash out of the toddler's reach.

Pacifiers

The existence of pacifier or finger habits, their frequency and duration, and whether a blanket or other object accom-

panies the habit should be discussed. The need to discontinue the pacifier habit prior to two years of age should be stressed. Finger and thumb habit cessation may continue until just prior to the eruption of the permanent maxillary incisors unless other factors deem earlier discontinuation advisable.

The longer the pacifier habit persists past age one, the more difficult it will be to discontinue. A sense of autonomy is developing by age two and the next baby often is arriving. Parents are reluctant to remove the pacifier, as they believe that this time may be too hard for the toddler because their attention is being shared with a newborn. Pacifier use has been associated with increased incidence of otitis media, fever, diarrhea, and colic in infants.²⁵

Prolonged use of the pacifier will direct the growth of the developing bones and teeth improperly. The pacifier displaces the tongue to the floor of the mouth. The palatal shelves are separated by an open midline suture. The repositioning of the broad, flat tongue, which is intended to guide and promote the lateral growth of the palate, allows unopposed pressure of the buccinator muscles to constrict the palate. The mandibular primary molars are tipped buccally by the tongue. The constricted palate causes the maxillary canines to be in traumatic occlusion with the mandibular canines, deflecting the mandible to one side or the other. This is known as a *functional cross-bite*. Ultimately, the constriction of the palate is so great that the crossbite occurs without the canines ever occluding.

An anterior open bite results from supereruption of the primary molars. Increased overjet occurs as the tongue pushes the pacifier anteriorly during sucking. The tongue is displaced to the floor of the mouth by the pacifier and the lingual counterforce for the maxillary primary molars is lost. The pressure of the buccinator muscles constricts the maxillary posterior segments because the mid-palatal suture is open (Fig. 18).

Once the bite has been shown to the parent and the etiology explained, most parents are willing to stop the habit. By recording the overjet and overbite prior to cessation of the habit, there will be a baseline for comparison at each six month recall visit. Parents are very impressed with the natural restructuring of the teeth and bones once normal

anatomic structures are dictating growth and occlusion instead of the pacifier. This dramatic change and improvement will almost ensure that the next sibling will not be using a pacifier in the same manner as the first child.

Some tips for discontinuing the habit are to poke a large hole in the pacifier bulb, dip the pacifier in white vinegar, cut the bulb off a little at a time, trade the pacifier at a toy store for something special, or send it to Santa, the Easter bunny, or some favorite fictional character for their babies to use. Most parents report that "cold turkey" works best.

The time and place that pacifier use may occur is limited, too. Bedtime usually is the most difficult time to remove the pacifier. Begin limitation early in the day and work up to bedtime. Sometimes the habit may continue temporarily due to illness or family problems. In some children, the pacifier may be used as a functional appliance to correct an anterior crossbite.

Brushing/flossing

The toddler's teeth should be brushed at least once a day. Bedtime is the most important time to brush. The dark, warm, moist oral environment is perfect for bacterial growth through the night. A toothbrush with a small, rounded head and soft bristles should be used.

The toddler is not permitted to brush first and then have the parents follow up. Toddlers chew on the bristles and plaque can no longer be removed properly. Injuries can occur with the toothbrush and the advantage of burnishing the fluoride in the toothpaste into the pits and fissures of the primary molars is lost if the toothpaste is eaten before efficient brushing is begun.

Parents should be instructed in toothbrushing. The bathroom may have slippery tile and sharp countertop corners. A seated position seems to be the easiest. The parent sits on the floor or bed and has the child lie between his or her legs (Fig. 19). If the child is uncooperative, the parent swings a leg over the child's legs and holds the child's hands (Fig. 20). The child's mouth will be open as he or she protests and the parent should take advantage of the moment to brush. This should require less than a minute. Toothpaste should not be used before two years of age or until the child is cooperating. The foaming action of the toothpaste, its taste, and the increased salivation may be



Fig. 19. Position for brushing.



Fig. 20. Position for brushing with an uncooperative child.

too much for the child to tolerate until this is accepted as part of the daily routine.

The same pattern should always be followed, regardless of age, for brushing the teeth. Begin with the occlusal surface of the maxillary molars, working around the maxillary arch, including the palatal surfaces. The first caries usually occur on the maxillary molars because the mandibular molars have the advantage of the saliva to wash away food residue. If toothpaste is being used, the fluoride will be burnished into these caries-prone fissures before it is used in brushing the other teeth. Move to the mandibular arch and brush in the same manner. The buccal and labial surfaces of the posterior and anterior teeth are brushed with the mouth partially closed so that the cheeks are not pressing tightly on these surfaces. The lower lip is retracted gently to brush the mandibular incisors. A favorite song can be played or sung while brushing. Parents must remain calm and simply complete the task. The child will cooperate eventually.

If there is no interdental spacing, flossing may be taught as well. The same position for brushing is recommended for flossing. Palms are up for the maxilla and down for the mandible. The floss is moved gently through the contacts and wrapped in a C-shape around each tooth. Wild Flossers (Johnson & Johnson, New Brunswick, NJ; 800/526-3967) are a good alternative. The dinosaur shape is easy to hold and the floss is ready to use with minimal dexterity.

Oral trauma

The management of the more common forms of oral trauma should be taught. There is a high incidence of trauma as children progress through crawling, walking, climbing, and running. Minor lip, tongue, or maxillary frenum lacerations are best treated with a popsicle. Parents should be warned regarding the possibility of profuse bleeding. The coldness will assist with vasoconstriction and the sucking will place pressure on the wound. Parents should be advised to have popsicles available for minor oral trauma.

Avulsion of a primary incisor is best treated with a treasure chest and an offering for the tooth fairy. (There are some who have recommended reimplantation; however, the risk to the developing incisor, the need for endodontic treatment, and the possibility of ankylosis make this practice questionable.) If the avulsed tooth cannot be located, a periapical film should be performed to rule out a complete intrusion. If the child has a cough and the tooth cannot be located, a radiograph of the chest should be obtained to rule out aspiration. Intrusions usually re-erupt without intervention in four to six weeks.

Displacement and subluxation of the maxillary primary incisors requires intervention only if the child cannot close his or her mouth due to traumatic occlusion. Manual repositioning may be necessary with marked displacement or buccal plate fracture. If there is no traumatic occlusion, no definitive treatment is

necessary. With normal healing, the mobility of the teeth and/or bone will subside within a few weeks. Extraction of primary maxillary incisors could result in the needless creation of a large buccal plate defect and possible damage to the developing permanent incisors.

The parent should be told about the possibility of discoloration secondary to the concussion injury and the possibility of damage occurring at the moment of the impact. The damage may vary from a tiny white spot lesion to a large defect on the facial surface of the developing permanent tooth. The extent of the injury to the successor cannot be predicted accurately. A medically compromised child may need antibiotic coverage for a buccal plate fracture. Ruling out a head injury should be the primary focus. Although this is not very detailed information, the parent will have a better idea of what to do and what to expect should minor trauma occur.

Caries risk assessment

Caries risk assessment is an essential element of the first visit. Oral hygiene and dietary counseling along with the "how much and when" for fluoride supplementation will be directed by the caries risk assessment. The risk is classified as high, moderate, or low. There are several factors to be considered in determining the caries risk assessment.

Medical history

If the child is autistic or delayed in some areas, rewards may be sugary snacks. Children with juvenile rheumatoid arthritis may not be able to masticate foods well, leading to a more cariogenic diet. Asthmatic children may have a higher incidence of caries due to the use of inhalers; chronic use of oral suspensions as medications or chewable tablets may increase the incidence of caries.

Plaque index

Visible plaque on the facial surfaces of the maxillary primary incisors and continued use of the baby bottle have shown a strong association with caries development.²⁶

Caries

The presence of caries in the early primary dentition is a predictor for continued caries.^{2,27} Two or more new lesions or recurrent caries found at the six month examination determines high risk.

Morphology of the primary molars

Deep pits and fissures or hypoplastic enamel of the primary molars may contribute to increased risk.

Hereditary influence

There seems to be a strong case for the role of heredity and host resistance to cariogenic bacteria. If one or both parents has been caries-free, the child may have a lower risk than the general population. We also know that mothers with multiple dental caries and high salivary counts of *S. mutans* may transmit the bacteria to their children and that female children more often reflect the caries experience of their mothers.⁴ Microbiologic assays can be performed to evaluate levels of salivary streptococci. Higher levels of the bacteria have been linked to increased caries incidence.²⁸

Preventive practices by the parents

These practices should be evaluated along with determining what knowledge, if any, the parents have regarding oral hygiene. The time interval between recall visits will be determined by the caries risk assessment.

Restorative treatment will reduce salivary counts of bacteria and certainly is the ideal protocol; however, behavior and financial limitations may require another approach to treatment.²⁹ Atraumatic restoration has been suggested as a possible method to "buy some time" and avoid sedation for young, uncooperative children. A hand instrument such as a spoon can be used to excavate gross caries gently and a glass ionomer can be placed. Fluoride varnish is becoming very popular and is near FDA approval.^{30,31} The fluoride varnish is painted gently on primary teeth with clinical decalcification or those that are deemed to be at risk. The author believes this will be the next best thing to dental sealants for prevention in pediatrics. If incipient caries are noted on the occlusal surfaces or marked decalcification, a sealant may be placed. Using a primer/resin beneath the sealant may enhance retention if moisture contamination is a problem.

Summary

The quality of a young child's life can be affected greatly by dental caries. Rampant dental caries can affect height, weight, and head circumference. The children have problems eating, sleeping, and may even

experience a change in mental status.^{32,33} Efforts toward educating our medical colleagues must be directed toward earlier examination and intervention. This early start will shift the emphasis from the management of early childhood caries to the prevention of early childhood caries. Prevention of that very first lesion can be achieved through this comprehensive, consultative approach to the care of our youngest dental patients.

Author information

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