# Child's Teeth



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# Developing Good Oral Health

As we fast approach the 21st century, one phrase comes to mind: The future is now. The way children care for their bodies today will have an impact on their health as adults.

The good news is that preventive dental care has dramatically improved the oral health of American children. Nowadays, it's possible for many children to reach adulthood without ever experiencing tooth decay. To help make this happen, follow the simple steps outlined here so that your child may enjoy a lifetime of beautiful smiles.



# **Before the Baby Arrives**

A balanced diet is critical for the proper development of an unborn child. Teeth begin to form when the mother is between the third and sixth months of pregnancy. A balanced diet, one that provides adequate amounts of vitamins A, C and D, protein, calcium and phosphorous, will provide the nutrients to develop healthy teeth.

You may have heard the tale that a woman loses a tooth for each pregnancy. It's not true. It's also a myth that calcium is removed from a mother's teeth during pregnancy. The calcium that a developing baby needs is provided by the mother's diet, not by her teeth. If she receives an inadequate amount of calcium in her diet, her body will provide the mineral from her bones. An adequate intake of dairy products, which are the primary source of calcium, or from supplements prescribed by a physician, will ensure that the proper calcium level is obtained.

Pregnant women may have the desire to eat more frequently between meals. While this is normal, frequent snacking can be an invitation to tooth decay. The decay process begins with plaque, an invisible, sticky layer of harmful bacteria that constantly forms on teeth. The bacteria convert sugar and starches that remain in the mouth to an acid that attacks tooth enamel. Brushing and cleaning between teeth with floss or an interdental cleaner can reduce the risk of decay.

Plaque that is not removed can irritate the gums, making them red, tender, and likely to bleed easily. This condition is called gingivitis and can lead to more serious periodontal disease that affects the gums and bone that anchor teeth in place. During pregnancy, gingivitis may occur more frequently due to a rise in the body's hormone levels. However, plaque — not changing hormone levels — is the major cause of gum disease. You can prevent gingivitis by keeping your teeth clean, especially near the gumline.

#### The Developing Smile: Tooth Eruption Charts

#### **Primary Teeth** Upper Teeth Erupt Shed Central incisor 8-12 mos. 6-7 yrs. Lateral incisor 9-13 mos. 7-8 yrs. Canine (cuspid) 16-22 mos. 10-12 yrs. First molar 13-19 mos. 9-11 yrs. Second molar 25-33 mos. 10-12 yrs. Lower Teeth Erupt Shed Second molar 23-31 mos. 10-12 yrs. First molar 14-18 mos. 9-11 yrs. Canine (cuspid) 17-23 mos. 9-12 yrs. Lateral incisor 10-16 mos. 7-8 yrs. Central incisor 6-10 mos. 6-7 yrs. **Permanent Teeth** Upper Teeth Erupt Central incisor 7-8 yrs. Lateral incisor 8-9 yrs. Canine (cuspid) 11-12 yrs. First premolar (first bicuspid) 10-11 yrs. Second premolar (second bicuspid) 10-12 yrs. First molar 6-7 yrs. Second molar 12-13 yrs. Third molar (wisdom tooth) 17-21 yrs. Lower Teeth Erupt Third molar (wisdom tooth) 17-21 yrs. Second molar 11-13 yrs. First molar 6-7 yrs. Second premolar (second bicuspid) 11-12 yrs. First premolar (first bicuspid) 10-12 yrs.

Canine (cuspid)

Lateral incisor

Central incisor

9-10 yrs.

7-8 yrs.

6-7 yrs.



# The Growing Years: From Birth to Six

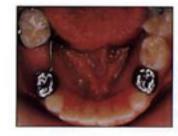
Teeth vary in size, shape and location in the jaws. At birth, usually 20 primary (baby) teeth have formed. They begin "erupting" at about age six months. By age 21, all 32 permanent teeth usually have erupted. Here is a quick reference chart that identifies primary and permanent teeth.

#### Baby's First Teeth

Usually, the front four teeth begin to appear when the baby is between age six months and one year. Some babies experience sore or tender gums while teething. Gently rubbing the child's gums with a clean finger, a small, cool spoon or a wet gauze pad can be soothing. A clean teething ring may also help. Contrary to common belief, fever is not normal while teething. If your infant has a fever while teething, call your physician.

Most children have a full set of 20 primary teeth by the time they are age three. Primary teeth are as important as permanent teeth — for chewing, speaking and appearance. They also help "hold" space in the jaws for the permanent teeth.

Sometimes a primary tooth is lost before the permanent tooth beneath it is ready to erupt. If primary teeth are lost too early, nearby teeth can tip or move into the vacant space. When the permanent teeth are ready to erupt, there may not be enough room for them. As a result, permanent teeth may grow into an improper position. To avoid this problem, your dentist may recommend using a space maintainer to reserve space for the permanent tooth.

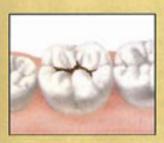


A space maintainer reserves space for the eruption of a permanent tooth.

#### **Tooth Decay**

Tooth decay can occur as soon as the teeth appear. Decay in primary teeth can damage erupting permanent teeth. A few ingredients are all that are needed to create the right conditions for tooth decay. The first is plaque, a sticky colorless film of bacteria that forms on teeth. When sugar and starch from food or drinks combine with plaque, an acid is produced that attacks tooth enamel. Repeated acid attacks can break down enamel and eventually result in a cavity.

Sugar and starch are present in many foods, even fruit and vegetables. Limiting snacks will reduce the number of acid attacks on tooth enamel. However, when children need a between-meal snack, select foods from the five food groups for a balanced diet.



Chewing surface decay



Decay between the teeth



Decay along the gumline

#### **Baby Bottle Tooth Decay**

One serious form of decay among young children is baby bottle tooth decay. This condition is caused by frequent and long exposures of an infant's teeth to liquids that contain sugar. Among these liquids are milk (including breast milk), formula, fruit juice and other sweetened drinks.

Putting a baby to bed for a nap or at night with a bottle other than water can cause serious and rapid tooth decay. Sweet liquid pools around the child's teeth giving plaque bacteria an opportunity to produce acids that attack tooth enamel. If you must give the baby a bottle as a comforter at bedtime, it should contain only water. And never dip a pacifier into sugar or honey.



Healthy primary (baby) teeth



Moderate Decay



Severe (rampant) decay

After each feeding, wipe the baby's gums and teeth with a damp washcloth or gauze pad to remove plaque. The easiest way to do this is to sit down, place the child's head in your lap or lay the child on a dressing table or the floor. Whatever position you use, be sure you can see into the child's mouth easily.

#### Thumbsucking

Sucking is a natural reflex and infants and young children may use thumbs, fingers, pacifiers and other objects on which to suck. It may make them feel secure and happy or provide a sense of security at difficult periods. Since thumbsucking is relaxing, it may induce sleep.

Thumbsucking that persists beyond the eruption of the permanent teeth can cause problems with the proper growth of the mouth and tooth alignment. How intensely a child sucks on fingers or thumbs will determine whether or not dental problems may result. Children who rest their thumbs passively in their mouths are less likely to have difficulty than those who vigorously suck their thumbs.

Children should cease thumbsucking by the time their permanent front teeth are ready to erupt. Usually, children stop between the ages of two and four. Peer pressure causes many school-aged children to stop.

Pacifiers are no substitute for thumbsucking. They can affect the teeth essentially the same way as sucking fingers and thumbs. However, use of the pacifier can be controlled and modified more easily than the thumb or finger habit. If you have concerns about thumbsucking or use of a pacifier, consult your dentist.

#### Helping a Child Get through Thumbsucking

- Instead of scolding children for thumbsucking, praise them when they are not.
- Children often suck their thumbs when feeling insecure.
   Focus on correcting the cause of anxiety, instead of the thumbsucking.
- Children who are sucking for comfort will feel less of a need when their parents provide comfort.
- Reward children when they refrain from sucking during difficult periods, such as when being separated from their parents.
- Your dentist can encourage children to stop sucking and explain what could happen if they continue.
- If these approaches don't work, remind the children of their habit by bandaging the thumb or putting a sock on the hand at night. Your dentist or pediatrician may prescribe a bitter substance to coat the thumb or use of a mouth appliance.

#### Tip Top Teeth for Tots

- . Put only water in a child's naptime or bedtime bottle.
- Wipe an infant's gums with a clean, damp cloth after feeding.
- . Start brushing baby's teeth as soon as the first tooth erupts.
- Take your child to see the dentist regularly, scheduling the first visit by the child's first birthday.
- Discuss your child's fluoride needs with your dentist or pediatrician.
- Brush and floss you child's teeth until the child can be taught to do this alone.
- . Set a good example by cleaning your teeth every day.



#### Diet

A good diet is essential for a child's growth and development. Like the rest of the body, the teeth, bones and the soft tissues of the mouth need a well-balanced diet. Children should eat a variety of foods from the five major food groups:

- · fruits
- · vegetables
- . breads, cereals and other grain products
- · milk, cheese and vogurt
- meat, poultry, fish, and alternates, such as dry beans and peas, eggs and nuts

Various factors can determine how foods affect a child's teeth. The more frequently a child snacks, the greater the chance for tooth decay. How long food remains in the mouth also plays a role. For example, hard candy and breath mints stay in the mouth a long time, which cause longer acid attacks on tooth enamel.



# Keeping Teeth Healthy



Brushing and flossing help remove harmful plaque bacteria. When choosing oral hygiene products, look for the American Dental Association Seal of Acceptance. The ADA Seal of Acceptance means the product is safe and effective for its intended use. The ADA reviews all advertising claims for any product bearing the Seal. Only those claims that can be supported by appropriate clinical and/or laboratory studies and scientific data are allowed.

A child-size brush with soft, rounded or polished bristles is recommended. Check your child's toothbrush often and replace it when it is worn. Bent or frayed bristles will not remove plaque effectively and may injure gums. Begin daily brushing as soon as the child's first tooth erupts. A pea-size amount of fluoride tooth-paste can be used after the child is old enough not to swallow it. By age 4 or 5, children should be able to brush their own teeth twice a day with supervision until about age seven to make sure they are doing a thorough job. However, each child is different.



Your dentist can help you determine whether the child has the skill level to brush properly.

Proper brushing removes plaque from the inner, outer and chewing surfaces. When teaching how to brush, you may wish to stand behind the child and hold the brush to be certain that brushing is done properly.

By age seven, children should be able to brush alone. Flossing, however, is a more difficult skill to master. You may wish to floss the child's teeth until he or she can do it alone. Show the child how to hold the floss and gently clean between teeth. At about age eight, the child should be able to floss under your supervision. If you're unsure as to when your child no longer needs supervision while cleaning his or her teeth, check with your dentist.

Flossing removes plaque between the teeth where a toothbrush can't reach. Flossing should begin when any two teeth touch.



Place the toothbrush against the gums.



Move the brush back and forth gently in short (tooth-wide) strokes. Brush the outer surfaces of each tooth, upper and lower. Repeat the same method on the inside surfaces and chewing surfaces of all the teeth.



Finish by brushing the tongue to help freshen breath and remove bacteria.



Use about 18 inches of floss, winding most of it around the middle fingers of both hands. Hold the floss lightly between the thumbs and forefingers. Use a gentle, back-and-forth motion to guide the floss between the teeth.



Curve the floss into a C-shape and slide it into the space between the gum and tooth until you feel resistance. Gently scrape the floss against the side of the tooth.



Repeat this procedure on each tooth. Don't forget the backs of the last four teeth.

#### Focus on Fluoride

Children who receive a balanced diet will get all the nutrients they need with one possible exception — fluoride. Fluoride is vital for strong, decay-resistant teeth. Fluoride is one of the most effective elements for preventing tooth decay. This mineral combines with tooth enamel to strengthen it against decay. Fluoride may also reverse microscopic cavities by enhancing the process in which minerals, including calcium, are incorporated into the teeth.

The most effective way for your child to get fluoride's protection is by drinking water containing the right amount of the mineral, (about one part fluoride per million parts water). This is of special benefit to children, because fluoride is built into the enamel as teeth form. Children who from birth drink water containing fluoride have up to 50 percent fewer cavities. Many of them remain cavity free through their teens.

Although it is beneficial for a child to brush with a fluoride toothpaste, children under age six should be supervised to avoid swallowing toothpaste. Use no more than a pea-sized amount of toothpaste on the child's brush. Children should be taught to spit out remaining toothpaste and rinse with water after brushing.

Before you give your child any vitamin or supplement that contains fluoride, check with your dentist to see if one is needed. Based on your dentist's assessment of your family's oral health, the use of additional fluoride-containing products may or may not be recommended.



### The Growing Years: From Six to 12

By age six, the child's jaws are growing to make room for permanent (adult) teeth. During the next six years, the primary teeth will be replaced with permanent teeth.

The first permanent molars usually erupt between ages five and six. They are often called six-year molars. Because they don't replace any baby teeth, they are often mistaken for primary teeth. However, they are permanent and must be cared for properly if they are to last throughout your child's lifetime. These molars are especially important because they help determine the shape of the lower face. They also affect the position and health of other permanent teeth.

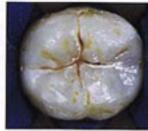
#### Sealing out Decay

A sealant is a clear material that is applied to the chewing surfaces of the back teeth (premolars and molars), where decay occurs most often. The sealant acts as a barrier, protecting the decay-prone areas of the back teeth from plaque and acid attacks.

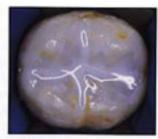
Pits and fissures are depressions and grooves in the chewing surface of the back teeth. They are difficult to keep clean because toothbrush bristles cannot reach into them. The sealant forms a thin covering that keeps out plaque and food and decreases the risk of tooth decay.



A single toothbrush bristle is too large to reach inside the fissure.



Chewing surface before sealant.



Tooth protected by shaded sealant.

Each tooth takes only a few minutes to seal. After cleaning the teeth that will be sealed, the dentist conditions the chewing surface to help the sealant adhere to the tooth. The sealant is then painted onto the tooth enamel, where it bonds to the tooth.

As long as the sealant remains intact, the tooth surface will be protected from decay. Sealants hold up well under the force of normal chewing and usually last several years before a reapplication is needed. Ask your dentist if your child can benefit from sealants.



#### Dental Visits

Regular dental visits are crucial to maintaining a healthy smile. Take your child to see the dentist by his or her first birthday. Although this may seem early to begin dental visits, the dentist can explain how the child's teeth should be cleaned at home, how diet and eating habits affect teeth and provide methods to ensure that sufficient fluoride is received.

During the first visit, the dentist will examine your child's mouth for tooth decay and growth or development conditions that may pose a problem in the future. The dentist will explain how to clean the child's teeth at home, how diet and eating habits affect teeth and methods to ensure your child gets the right amount of fluoride.

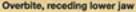
#### Malocclusion

Malocclusion, or bad bite, is a condition in which the teeth are crowded, crooked or out of alignment, or the jaws don't meet properly. This condition may become particularly noticeable between the ages of six and 12, when the permanent teeth are coming in. This "bad bite" may be inherited or result from events in the child's development.

Here are some of the problems that can occur when there is a significant malocclusion:

- It's more difficult to keep teeth and gums clean where teeth are crooked or crowded. This increases the risk of tooth decay and gum disease.
- Malocclusion can interfere with the proper development of the jaws.
- . Protruding teeth are more easily chipped or fractured.
- . Some malocclusions may interfere with normal speech.
- Teeth that are out of position are more likely to wear abnormally or faster than those that are properly aligned.
- Some malocclusions are unattractive and may subject children to unfortunate nick-names.







Corrected overbite

Early examination and treatment may help prevent or reduce the severity of malocclusions in the permanent teeth. An early evaluation allows the dentist to determine when any treatment needed should begin. Starting treatment or preventive care at the best time can reduce the overall treatment time and result in the best outcome.

Dentists try to prevent the development of malocclusions, if possible. Some preventive orthodontic treatment may be started when the primary teeth are still in place. Often effective preventive treatment is done during a child's growth period. Different types of orthodontic appliances, including some that are removable, are used to prevent and treat malocclusions.

Orthodontic treatment may be divided into distinct stages or may be continuous. The starting age, the duration of treatment, the type of appliances used, the outcome of the treatment, and the cost of treatment depends upon the nature and the severity of the malocclusion being treated. In most cases, the cooperation of the patient is a major factor in the success of orthodontic treatment.

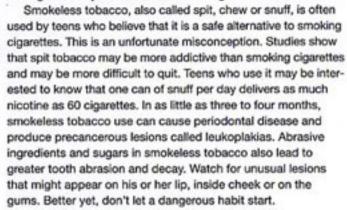
#### Sport a Winning Smile



When a child begins to participate in recreational activities and organized sports, injuries can occur. Mouth protectors, also called mouthguards, are an important piece of protective face gear. You've probably seen mouth protectors used in contact sports, such as hockey, football or boxing. Coaches and team members know that mouth protectors cushion blows that would otherwise cause broken teeth, injuries to the lips and face and sometimes even jaw fractures. Ask your dentist about custom and store-bought mouth protectors.

#### Tobacco

Social attitudes and acceptance of smoking have greatly changed in the past decade. This is most evident in legislation that restricts or prevents smoking in many public buildings and in the workplace. In spite of the negative publicity, some youth are still drawn to smoking cigarettes or chewing tobacco. Tobacco in any form can jeopardize your child's health and cause incurable damage. Teach your child about the dangers of tobacco.



#### Periodontal diseases

Periodontal (gum) diseases are caused by bacterial infections that attack the gums, tissue and bone. When plaque is not removed it can harden into a rough, porous deposit called calculus, or tartar. It can only be removed when teeth are cleaned in the dental office. Tartar that forms below (under) the gumline makes it more difficult to remove plaque film and may interfere with the attachment of the teeth. This can create conditions that lead to chronic inflammation and infection.

An early sign of periodontal disease is gums that bleed easily, especially when teeth are brushed. If not treated at an early stage, serious problems can result. Eventually, bony support can be lost and teeth may become loose, fall out or require extraction.

Periodontal diseases can occur at any age. One form of periodontal disease, called juvenile periodontitis, can affect some teenagers. Adolescents may need to be reminded about practicing good oral hygiene. It's important that both children and adults have regular dental checkups.