
FEATURE

Healthy smiles: Start now

Eager to ensure healthy smiles? Take this quiz to see if you have all the facts. Answer true or false.

1. Baby teeth don't matter; they just fall out in grade school and are replaced with permanent ones.
2. Natural sweeteners like honey and maple syrup are as harmful to teeth as refined sugars.
3. The use of pacifiers is related to the need for orthodontics (braces) in older children.
4. Dental health impacts language development.
5. Teething babies usually have fever.
6. Diet and heredity can influence dental decay.
7. Oral caries (cavities) is the No. 1 chronic disease affecting young children.

Want to know the correct answers and learn more? Read on.

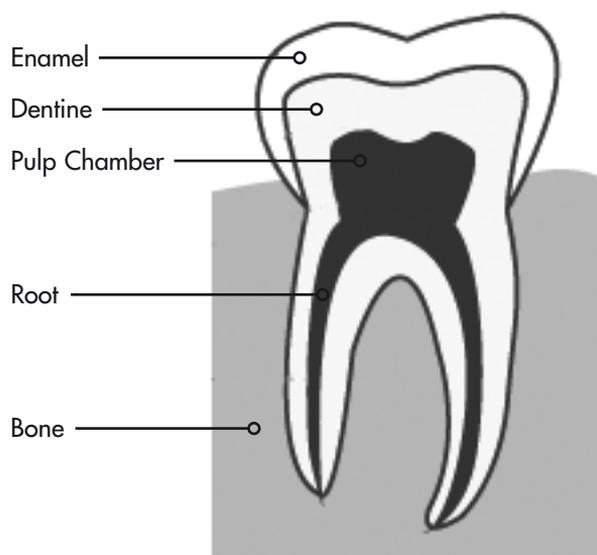


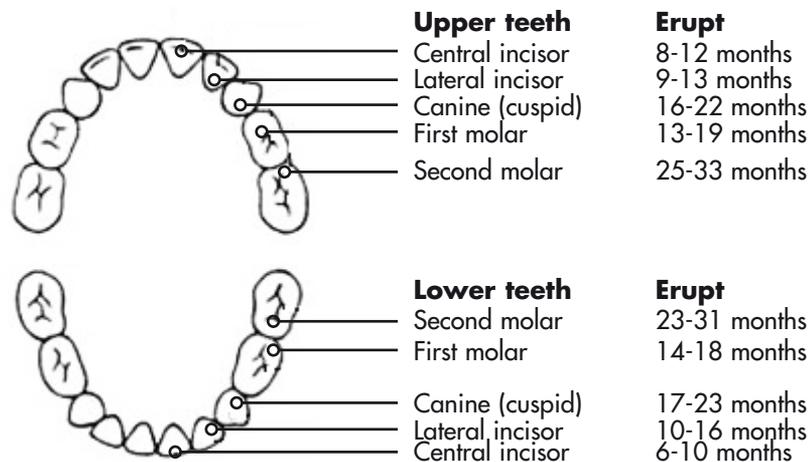
The condition of a child's teeth, whether the toothy grin of a toddler or the decayed incisor of a 4-year-old, have a life-long impact. Right from the start nutrition, habit, diet, and heredity impact oral health and either the likelihood of tooth decay, speech problems, and pain or a smile that reflects self-confidence, a positive self-image, and a general sense of well-being. The good news is that, like most events in early childhood, early intervention works, and the time to start ensuring healthy smiles is now.

Tooth science

A tooth has two parts: the *crown* that is visible and the *root* that is imbedded in the jaw.

The outmost layer of the crown is *enamel*. This covering is the hardest substance in a person's body, and it protects the interior tissues of the tooth. The *dentine*, a layer just under the enamel, is not as hard and may be sensitive or painful in areas where enamel doesn't offer a protective cover. The *pulp* is





soft tissue that lies under the dentine. It contains blood and nerve cells and extends from high in the crown to the end of the root. The blood supply in the pulp keeps the tooth *viable* or alive.

The *root* comprises two-thirds of a tooth, sits below the gum line, and anchors the tooth in the mouth. It is not visible.

Teething, the slow process of tooth eruption, typically begins when a baby is 6 to 8 months old. The central incisors (lower bottom front teeth) usually appear first, followed in four to eight weeks by the central and lateral incisors (four upper front teeth). The lower incisors follow in about a month. Molars and cuspid (canine) teeth are typically in place by about 30 months.

Caring for teeth

Tooth development begins before an infant's birth and depends on a nutritious prenatal diet. The eruption of a first tooth is celebrated as an important developmental milestone, and it's also the appropriate time to establish the habits of good oral hygiene and dental care.

Discuss tooth cleaning options with the baby's parents; consistency is essential to developing habits. Some dentists recommend starting off with a damp, soft brush (no toothpaste); others a wet gauze pad. In either case, wipe the tooth gently on both front and back surfaces. Like many routines, the baby will learn to expect—and accept—tooth cleaning twice a day or after feedings.

Tooth decay or *dental caries* is an infection that

results from an explosion of harmful bacteria living in the mouth. Bacteria feed on sugars in food and produce acids that attack the tooth enamel. Repeated acid attacks create holes in the enamel, opening a door to further bacteria invasion. Ultimately, the bacteria can invade the inner structures of the tooth and, unless treated, can kill the tooth and send infection into the bone.

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Infants are not born with the kind of bacteria most responsible for tooth decay. In fact, like other contagious infections, the bacteria is typically transferred to the baby's mouth from someone who carries that bacteria—often parents or caregivers who share spoons or clean a pacifier or bottle nipple in their mouths.

Reduce the incidence of shared bacteria by making sure mouthed toys are sanitized between each child's use and never sharing spoons or other utensils.

Never allow a baby to fall asleep with a bottle in the mouth. Pooled milk, both breast milk and formula, in the mouth is a rich breeding ground for bacteria. The resulting tooth decay is called *baby bottle mouth*.

Hygiene routines become increasingly important as babies transition to a diet of solid foods. Often the

transition from infancy to ambulatory toddlerhood comes with the practice of *grazing*, frequent meals eaten on demand and often on the go. Finger foods for toddlers makes this practice attractive as an easy way to respect individual schedules and preferences. The down side is that grazing delays the toddler's ability to sense hunger and satiety (feeling full) because they are eating all the time.

Young children do need frequent meals and snacks, but work to formalize these events. When mealtime is over, put away the food until the next mealtime. Make sure children learn that meals happen while seated and that ambling about with food or drink is not acceptable.

Typically the transition to solid food also introduces a broader range of food options, including, unfortunately, foods that have a high sugar content. Sugary foods are directly linked to tooth decay. Be aware of these dangers for adults and children:

- Natural sugars like honey and maple syrup are as harmful to teeth as refined sugars.
- Sticky sweets are particularly harmful because the sugars adhere to the teeth and are more difficult to wash away.
- Sticky fruits like raisins, dates, and dried apricots, while nutritious, are sugar-rich. They are best served with meals when other foods can help remove the sugars from the teeth.
- Rewarding behavior with sweets—candy, cookies, and cake—establishes a destructive habit for teeth and for health in general.

- Sweetened drinks are as harmful as solids. Milk, formula, juice, and other sweetened liquids promote bacterial growth. Diluting juice does not reduce sugar exposure. As a better practice, ensure the nutritional benefits of a full serving and don't prolong the amount of time sugars are in the mouth. Offer water at the end of meals.
- Tooth brushing or rinsing after meals helps remove the food debris that bacteria feed on, thereby reducing the time teeth are exposed to the decay process.

Toddlers will likely assert their autonomy and demand time to brush their own teeth. Supervision will be necessary for several more years, but helping young children learn to brush their own teeth is an essential step in independence and self-regulation. And while toddlers may be enthusiastic about their skills, their control, focus, and coordination are still developing.

MAKE IT CLEAR THAT TOOTH CLEANING IS NOT NEGOTIABLE.

Make sure each child has a soft bristled toothbrush. Label it with the child's name and never allow sharing. Store brushes so they remain clean, dry, and not in contact with other brushes. You can buy special holders or simply use an inverted egg carton that's been sanitized. Punch a hole in the domes to hold the brush with the bristle up. Replace the carton regularly. Replace brushes when the bristles are bent, typically about every three months.

Model proper brushing by brushing your own teeth when the children brush theirs. Hold the brush firmly and use an up-and-down motion, from the gum to the biting edge.

Because it's almost impossible to schedule brushing time at a sink for a group of children, make brushing a group activity at the end of lunchtime. When plates are cleared away, children get their brushes and a cup of water. Show how to dampen the brush by dipping in the water, brushing, taking a sip of water to swish, and spit the water back into the cup. Yes, this will invite giggles and possibly

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misaimed spits at first, but work toward routine and habit. Use an egg timer or hourglass to encourage brushing for two minutes before rinsing.

Make it clear that tooth cleaning is not negotiable (like having a diaper changed). Your firmness and consistency set the groundwork. Again, work with parents to develop a game plan. When you work together, you win.

Tooth pain and injury

Generally by age 30 months children have all their primary (baby) teeth, including second molars. These primary teeth are essential to a young child's oral language development, nutrition, and appearance. Further, they serve as placeholders for future permanent teeth—guiding the permanent teeth developing in the jaw into their correct positions.

Teething may occasionally cause mild irritability and excessive drooling. Some babies develop a low-grade fever (not more than 100 degrees). A higher body temperature indicates illness, not teething. Many babies are comforted by biting on cool (not frozen), hard toys. Most often the baby's gums are tender and may be swollen. Massage gently with a clean finger.

Older infants and toddlers may also experience discomfort with the eruption of permanent teeth, especially the molars.

Secondary (permanent) teeth typically begin to replace the primary teeth at around 5 years, a process that continues until the eruption of wisdom

teeth (molars) in late adolescence.

Permanent tooth eruption in older children is unlikely to cause significant discomfort unless the jaw is too small. In this case pain is generalized and the advice of a dentist is important.

The most common cause of mouth pain or toothache is tooth decay. Toothache pain can be localized with increased sensitivity to hot or cold foods and pain when chewing; the pain can also radiate into the jaw and ear. The gum line may be swollen, red, or blistered.

Accidents can also cause tooth pain or damage. Make sure you have parents' contact information on hand in case of emergency. A chipped permanent tooth must be cared for immediately to minimize the risk of tooth death. If a child's tooth is knocked out, contact the family and dentist immediately and save the tooth. If the tooth is dirty, swish it in a cup of water or milk to bring to the dentist. You can also try to replant a permanent tooth by putting it back into its socket and having the child bite down on a gauze pad to hold it in place. A dentist must evaluate the situation within 30 minutes to save the tooth.

If the tooth area is bleeding but the tooth still in place, offer an ice pack immediately to minimize swelling and bleeding. Contact the parents so they can contact a dentist immediately for further evaluation.

Special issues

Fluoride. Fluoride reduces and can sometimes reverse early signs of tooth decay. Fluoridation of public water supplies has been proven to significantly reduce the incidence of tooth decay. It is, however, possible to have too much fluoride and some parents may object to its use in your classroom tooth cleaning routine.

Most simply, skip toothpaste. Brushing is important, and while paste, with or without fluoride, is a useful addition, it's not essential. If you choose to use toothpaste, make sure you have parents' permission. If permission isn't universal, skip the paste, just as you would avoid serving peanuts to the group if one child has an allergy to them.

Pacifiers and thumbs. Many babies and young children comfort themselves by sucking on a pacifier or finger. This practice is not likely to impact tooth placement or mouth structure. Beyond the age of 5, however, it can affect the position of erupting permanent teeth and the shape of the jaw, resulting in

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the need for orthodontic care (braces).

Visiting the dentist. Dental health experts recommend that young children first visit a dentist when all primary teeth are in place, unless there is a dental emergency. Help families and children make dental visits an exciting experience—even if you're afraid and anxious when it's time for your checkup! If possible, invite a dentist or dental hygienist to visit your classroom to share information and demonstrate good practices.

In the classroom. Help ensure children's positive understanding of dental care. Set up the dramatic play center like a dental office with a receptionist's desk, special chair for doll patients, toothbrushes for the dolls, mirrors, models of teeth, lab coats, and charts and brochures on healthy teeth.

Make sure to include books about oral health in your classroom library. Explore new vocabulary words like *gums, molars, cavities, jaw, bacteria, nutrition, decay, hygiene, primary, temporary, and permanent*, for example.

Resource books for children

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