

# Infant Oral Health



Erica A. Brecher, DMD, MS<sup>a</sup>, Charlotte W. Lewis, MD, MPH<sup>b,\*</sup>

## KEYWORDS

• Infant • Dental caries • Fluoride • Primary dentition • Prevention

## KEY POINTS

- Habits established in infancy affect future oral health.
- Fluoride is the cornerstone of preventive oral health.
- Habits that promote oral health in infants also support normal growth and development and help establish a healthy lifestyle.

## INTRODUCTION

At first glance, *infant* (defined as children younger than 12 months of age) and *oral health* may not seem like words that belong together. After all, most infants are born without teeth and usually remain toothless for the first half of their infancy. By the time infants turn 1 year old, they probably only have a few teeth. One might ask, Why even worry about oral health in infancy? As it turns out, infancy is a critical time to establish habits, both good and bad, that have the potential to affect an individual's future oral health as well as overall health and well-being into adolescence and beyond. Maintaining healthy baby teeth, also referred to as primary teeth, is critical to facilitate proper growth and development in children. Primary teeth are important for eating, speaking, and growth of the jaws. Dental caries and premature loss of baby teeth can lead to severe problems in the permanent dentition. Primary pediatric care practitioners typically have multiple visits with infants and their parents before they see a dentist and therefore have a crucial role to play in promoting positive oral health practices and habits.

## NORMAL DENTAL DEVELOPMENT AND ERUPTION

Teeth start to develop in utero. The primary dentition initiates formation at approximately 6 weeks to 8 weeks of gestation and dentition begins to calcify by the end of the first trimester. Most of the permanent dentition begins to form at approximately 5 months

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Disclosures: Neither author has financial or any other conflict of interest related to the material discussed here.

<sup>a</sup> Department of Pediatric Dentistry, Virginia Commonwealth University School of Dentistry, 521 North 11th Street, PO Box 980566, Richmond, VA 23298, USA; <sup>b</sup> Department of Pediatrics, UW School of Medicine, Seattle Children's Hospital, UW Box 354920, Seattle, WA 98195, USA

\* Corresponding author.

E-mail address: [cwlewis@uw.edu](mailto:cwlewis@uw.edu)

Pediatr Clin N Am 65 (2018) 909–921  
<https://doi.org/10.1016/j.pcl.2018.05.016>

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of gestation, calcifying after birth. Even though the primary teeth begin to form in utero, most infants do not have erupted teeth present at birth. When erupted teeth are present at birth, estimated to occur in the range of approximately 1 in 2000 births,<sup>1</sup> these are known as natal teeth. If teeth erupt within the first month of life, they are referred to as neonatal teeth. Natal and neonatal teeth are usually mandibular (lower) incisors, and more than 90% represent normal dentition, not extra (supernumerary) teeth. Usually no intervention is required. If natal/neonatal teeth interfere with feeding, cause traumatic ulceration of the tongue (Riga-Fede disease), or are so loose that they may pose an aspiration risk, however, a dentist should be consulted. Because they usually comprise the normal dentition, extraction should be avoided if possible.

More commonly, the first tooth erupts at approximately 6 months of age. There is substantial variability between individuals in dental eruption timing. But neither a 4 month old with 2 teeth nor a 9 month old with no teeth should cause concern. The primary teeth erupt sequentially, at a rate of approximately 1 tooth per month, until all 20 primary teeth have erupted by approximately 24 months to 30 months of age (Table 1). The first primary teeth to erupt are typically the mandibular (lower) central incisors. The usual sequence of primary tooth eruption is central incisors, lateral incisors, first molars, canines (cuspids), and finally the second molars (Fig. 1). Primary tooth approximate eruption timing is presented in Table 1.

Eruption of a tooth may occasionally be preceded by an eruption hematoma or eruption cyst. It appears as a bluish swelling overlying the area where the tooth is about to erupt. These are self-limiting, and the hematoma or cyst subsides as the tooth erupts normally. Commonly, primary teeth eruption, referred to as “teething” is associated with symptoms, such as fussiness, drooling, biting, sucking, sleep disturbances, ear-rubbing, facial rash, mild temperature elevation, and decreased appetite for solids.<sup>2</sup> Teething does not cause diarrhea, respiratory infections, or true fever,<sup>2</sup> although teeth eruption and these entities may be present coincidentally. Some children find a cool teething ring to be soothing, and, occasionally, acetaminophen or ibuprofen may be needed to reduce pain from teething. The Food and Drug Administration has issued warnings against the use of benzocaine or viscous lidocaine and homeopathic teething tablets for teething because these have been associated with serious or fatal side effects in young children.<sup>3,4</sup>

### Dental Anatomy

The visible portion of a tooth is called the crown. The crowns of primary teeth, except for the primary molars, are smaller than their permanent successors. The crown consists of 3 layers: enamel (a hard, outer protective layer), dentin (made up of tubules to transport nutrients within a tooth), and pulp (nerves and vascular structures critical for the health

**Table 1**  
Approximate ages of primary teeth eruption in the upper and lower jaws

Primary Tooth Name	Eruption Timing	
	Upper <sup>a</sup>	Lower <sup>b</sup>
Central incisor	8–12 mo	6–10 mo
Lateral incisor	9–13 mo	10–16 mo
Canine	16–22 mo	17–23 mo
First molar	13–19 mo	14–18 mo
Second molar	25–33 mo	23–31 mo

<sup>a</sup> Upper: maxillary.

<sup>b</sup> Lower: mandibular.

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