

TITLE: Natal and Neonatal Teeth

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What are natal and neonatal teeth? Children that are born with teeth! Natal teeth are teeth that are already present at the time of birth, and neonatal teeth are teeth which erupt in the first 30 days of life. They are most commonly the mandibular central incisors, which are the teeth that usually erupt first. In an average child, the mandibular incisors erupt at about 8 months of age. The next teeth to erupt at 10 months are the maxillary central incisors. Similarly, these are the next most commonly seen natal teeth. Teeth that erupt in the 3-5th month of life are called precocious dentition.

Natal teeth have been seen in babies for centuries, and have been documented throughout literature. Shakespeare describes in Richard the Third, "Marry they say that my uncle grew so fast that he could gnaw a crust of bread at two hours old." In Henry the Sixth, Richard says about himself, "The midwife wondered; and the women cried, 'O Jesus bless us, he is born with teeth!' And so I was; which plainly signified that I should snarl and bite and play the dog." The reaction of parents to children born with teeth has been varied, some cultures thought the children would be heroes and were selected by fate. An example of this is Cajus Plinius Secundus "The Elder" thought a splendid future awaited male children born with teeth and cited Manius Curius, who owned his nickname of "Dentatus" to this occurrence. "Born with two teeth in his mouth an omen that he will be strong, fierce and harsh, but without fear." In England they believed children born with teeth will grow into famous soldiers. In France and Italy it was assumed they will "get on in the world." Swedish people once held the belief that they could cure an injured finger if placed in the mouth of a child born with teeth.

However, in other cultures, children born with teeth were considered an ill omen. In China, if a baby is born with teeth, it is an ill omen for the family. When thought that when the precocious teeth begin to bite, one of the parents will die. If it is a boy, the father, if a girl, the mother. From Denmark comes the quote, "Old age dentition is a rare thing, just as are children born with teeth." Hallager. From the Italian and German proverb, "The one whose teeth grow early, will sink early into the grave." In extreme cases in some African tribes, the child was put to death shortly after birth, as it was believed that natal teeth not only foretell disaster to the child, but to anyone with whom it comes into contact.

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The incidence of natal and neonatal teeth is difficult to determine, and reports vary widely, most certainly under reported because in some cultures great fear and negativity was associated with natal teeth. Natal teeth are relatively uncommon, one review of 359 recorded cases suggests an incidence of 1 in at least 3,000 births. To put that into perspective, Ob/Gyn residency programs average 2,000-7,000 deliveries/ year. In example, 2007 UTMB did 7,100. So this is something most of us will see in our careers. Natal teeth are more common than neonatal teeth, with a ratio about 3:1. 85% are deciduous mandibular incisors. <.01% lateral mandibular incisors, 2.5% other mandibular teeth, 4% upper central incisors, <.01% other maxillary teeth. There has been some debate about whether these teeth are deciduous or supernumerary teeth. In analysis of 116 natal teeth done by Bodenhoff, he found 103 were prematurely erupted deciduous teeth, 13 were supernumerary teeth., Aka "hyperdontia" Of the supernumerary teeth, they are usually permanent, 0.8% were deciduous, and 2.1% permanent overall.

To review the embryology of tooth formation, teeth are derived from the ectoderm of the first branchial arch, and the ectomesenchyme of the neural crest. For human teeth to have a healthy oral environment, enamel, dentin, cementum, and the periodontium must all develop during appropriate stages of fetal development. Primary (baby) teeth start to form between the sixth and eighth weeks. Permanent teeth begin to form in the twentieth week. When examining natal teeth, there has been good agreement among histologic investigations. There is NO root formation, despite eruption. Increased size of pulp with increased number of dilated blood vessels in the pulpal tissue as well as the odontoblasts, and no cementum formation. The straight course of the dentinal tubules in the incisal part has an irregular course of the dentinal tubules in the cervical area. In the cervical part proper, the dentin is without tubules.

The etiology of tooth eruption is unknown. Although researchers agree that tooth eruption is a complex process, there is little agreement on the identity of the mechanism that controls eruption. Some commonly held theories that have been disproven over time include: the tooth is pushed upward into the mouth by the growth of the tooth's root, the tooth is pushed upward by the growth of the bone around the tooth, the tooth is pushed upward by vascular pressure, and the tooth is pushed upward by the cushioned hammock. Similarly, the etiology of natal teeth eruption is unknown. There is a possible genetic link, as it often occurs in same family. However, no clear genetic pattern has been identified. Gates thought it may be an irregular dominant trait, perhaps associated with an inhibitor gene, or the presence of two genes.

Natal and Neonatal teeth are not, in themselves problematic. The problems arise with feeding the infant. Natal teeth are usually not well formed, but they are firm enough that, because of their placement, they may cause irritation and injury to the infant's tongue when nursing. Natal teeth may also be uncomfortable for a nursing mother. Frequently, natal teeth are removed shortly after birth while the newborn infant is still in the hospital. They *must* be removed if the tooth is loose and the child runs a risk of aspiration, or "breathing in" the tooth.

Most of the time, natal teeth are not related to a medical condition. However, sometimes they may be associated with:

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- Ellis-van Creveld Syndrome; Bimanual ulnar polydactyly, chondrodysplasia of long bones, leading to dwarfism, hidrotic ectodermal dysplasia affecting nails, congenital heart malformations.
- Hallermann-Streiff syndrome; parrot nose, mandibular hypoplasia, proportionate nanism, hypotrichosis, blue sclera, congenital cataract.
- Jadassohn-Lewandowski Syndrome; congenital thickening of the nails, palmo-plantar keratosis, oral leukokeratosis (keratinized leukoplakia).
- Soto syndrome; excessive physical growth during the first few years of life→taller, heavier, disproportionately large and long head with a slightly protrusive forehead

In summary, natal teeth are relatively rare (1:3000 births), but you WILL likely see it in your career. We don't know what causes it, possibly genetics. It's awesome or scary, depending where you come from. The teeth are usually the lower incisors, and those are the first teeth to erupt normally (8 mo). They are usually premature deciduous teeth and will fall out, they have no roots, and are not well formed. You can pull them out if they are causing mouth ulcers, or pain to mother. They may be associated with syndromes, so a good physical exam is necessary.

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