



Healthy Teeth in Pregnancy and Infancy

This article was originally published in the monthly Ask the Midwife column that appeared from 2003-2007 in the Willy Street Reader in Madison, WI. Ingrid Andersson, CNM, addressed questions related to health and nutrition in the childbearing year.

Question: I have a friend whose baby had cavities before the age of 2, and she was told it was from breastfeeding at night. My child still nurses at night. Should I wean? I just called my dentist to make a first appointment for my 18-month old. The receptionist told me that the dentist doesn't see children under five, because "it's not needed." I'm confused, because I have an American Dental Association pamphlet that says I should schedule my child's first visit by his first birthday.

You have raised a huge and wonderful topic, and you are not the only one confused! Dentists themselves debate and speculate over what constitutes best practice for building strong and beautiful teeth.

Your child's dental health is closely related to last month's topic of introducing solid foods. It is also closely related to your own health as a pregnant or nursing mother. Like many complex health issues, it's inseparable from the context of family and culture.

Let's start with the least debated part of this question – the tooth decay process. Every time we bite into a piece of food or take a sip of beverage, the sugars or fermentable carbohydrates in the food or drink react within minutes with the bacteria present in our mouth and form acid. Acidic pH in the mouth encourages bacterial overgrowth and colonization, which, if left unchecked, eats away the hard outer enamel of teeth. The more frequently we put those refined carbs or sugars in our mouths, the greater our potential for decay and cavities. Therein lies the theory that frequent night nursing causes "nursing caries" in young children. At night, a baby's swallowing may be slower and saliva production decreased, so that milk can stagnate on and around the teeth. More on this later.

Some people might ask if it matters whether "baby" teeth are decayed or lost, since these teeth will fall out and be replaced by permanent teeth later, anyway. It does matter, and there several reasons why. One is that bacterial susceptibility and colonization in childhood will be carried through to adulthood. Another is that primary teeth hold proper spaces for the secondary teeth and help shape facial structure, jaw alignment and bite. Also, tooth decay and treatment can be physically and emotionally painful. And last but not least, the mouth is the front door to our GI tract – its health plays a role in our whole digestive system and microbiome.

There are two prerequisites for dental carries: 1. a tooth must be susceptible to decay; and 2. bacteria must be left for long periods of time on the tooth surface. Over the years, I have asked different dentists whether sugar causes cavities and am always surprised to hear them answer "no". What they were really saying, I know now, is that both susceptibility and a certain pattern of exposure are necessary, before decay can develop.

The bacteria involved in decay is *Mutans streptococcus*. There are many strains of *Mutans streptococcus*, and they vary culturally and geographically, as well as in levels of virulence and cariogenicity (their ability to erode enamel). The primary source of the bacteria in children is mom.

Susceptibility seems to be somewhat hereditary, meaning some people naturally have more acidic saliva, poor quality tooth enamel, or mineral imbalances in their blood. Some of us produce less saliva than others, and that sets us up for tooth decay, because saliva acts as a buffer. Periods of high stress can decrease both mouth pH and saliva production. Decreased saliva production can be a side effect of some medications or a natural part of certain life stages, such as lactation and menopause (due to suppression of progesterone).

There are windows of susceptibility. In children, there is a window between 19 and 31 months of age, ending when all primary teeth have erupted. The reasons for this window are not clear, but the appearance of caries at this time is the end product of a long process. The susceptibility therefore was actually six or more months prior and the first teeth affected are typically the first that erupted. Another childhood window of caries appearance is at 6-8 years of age, when first permanent molars erupt.

If you have a history of cavities yourself and/or worry that your baby might be susceptible, there are proactive measures you can take. Bacteria require about 12 hours of growth before they build a matrix that goes to work on teeth. This is where brushing twice a day and flossing come in. Brushing disrupts bacterial colonization and inhibits decay.

Lactation experts, such as Jan Riordan and Kathleen Auerbach, and prevention-oriented dentists and baby physicians such as Dr. William Sears assert the number one thing we can do to create cavity-free children is to breastfeed. Breastfeeding provides the essential nutrients for hard durable enamel, which is already fully formed by the time teeth appear. Feeding straight from the breast, unlike bottle-feeding, provides the mechanical action necessary for preventing milk from pooling in the mouth and leading to increased bacterial growth. Furthermore, breastfeeding babies work for their food, and the subsequent advantages to jaw and dental arch structure include ample room for teeth development. "Overall, breastfed children have less dental decay than do those who are fed otherwise," say Riordan and Auerbach.

What about night feeding in particular? Night-time nursing in itself appears to only slightly contribute to tooth decay. Breast milk has a 0.01 decay potential, which compares favorably to water, which has 0.0 tooth decay potential. However, a 10% sucrose solution has a 1.0 decay potential. In other words, breast milk + sucrose possess far greater decay potential – how, what and when your child eats solids matters! Avoid fermentable carbohydrates (such as sodas and juices), as well as highly acidic foods (sodas, some fruits, chewable vitamin C). Avoid sweet medicines. Discourage continual snacking.

Many pediatric dentists and baby doctors also recommend wiping your baby's gums and tongue with a slightly moist gauze or cloth after the first teeth appear, usually around 6-7 months. They recommend doing this at minimum every 24 hours. When your child is old enough to mimic teeth-brushing rituals, help your child brush with a very soft tooth brush. Technically, toothpaste is not necessary (at any age). Thorough and methodical brushing adequately disrupts the bacteria-sugar-acid cycle. Flossing and fluoride are recommended by many dentists but remain controversial.

A well-baby dental visit seems reasonable to me. Seek out a pediatric or holistic family dentist, a health partner in prevention. You can inspect your child's teeth yourself by having your child lay his or her head in your lap and gently pulling away the upper, then lower lip to look for varying white and/or darkened areas. Signs of decay would appear most likely on the four upper front teeth.