

---

# Oral Health



First Edition, 2006. Updated 2007.



California Childcare Health Program  
Administered by the University of California, San Francisco School of Nursing,  
Department of Family Health Care Nursing  
(510) 839-1195 • (800) 333-3212 Healthline  
[www.ucsfchildcarehealth.org](http://www.ucsfchildcarehealth.org)



Funded by First 5 California with additional support from the California Department of Education Child Development Division and Federal Maternal and Child Health Bureau. This module is also funded by First 5 Oral Health Initiative/Dental Health Foundation. Some materials in this module were adapted from the first edition, funded by UCSF School of Dentistry Center to Address Disparities in Children's Oral Health (CAN-DO) Center.

---

This module is part of the California Training Institute's curriculum for Child Care Health Advocates.

---

## Acknowledgements

The California Childcare Health Program is administered by the University of California, San Francisco School of Nursing, Department of Family Health Care Nursing.

We wish to credit the following people for their contributions of time and expertise to the development and review of this curriculum since 2000.

The names are listed in alphabetical order:

### Main Contributors

Abbey Alkon, RN, PhD  
Jane Bernzweig, PhD  
Lynda Boyer-Chu, RN, MPH  
Judy Calder, RN, MS  
Lyn Dailey, RN, PHN  
Joanna Farrer, BA, MPP  
Robert Frank, MS  
Lauren Heim Goldstein, PhD  
Gail D. Gonzalez, RN  
Jan Gross, BSN, RN  
Susan Jensen, RN, MSN, PNP  
Judith Kunitz, MA  
Mardi Lucich, MA  
Cheryl Oku, BA  
Tina Paul, MPH, CHES  
Pamm Shaw, MS, EdD  
Marsha Sherman, MA, MFCC  
Kim To, MHS  
Eileen Walsh, RN, MPH  
Sharon Douglass Ware, RN, EdD  
Mimi Wolff, MSW  
Rahman Zamani, MD, MPH

### Editor

Catherine Cao, MFA

### CCHP Staff

Ellen Bepp, Robin Calo, Sara Evinger, Krishna Gopalan, Maleya Joseph, Cathy Miller, Dara Nelson, Bobbie Rose, Griselda Thomas

### Graphic Designers

Edi Berton (2006)  
Eva Guralnick (2001-2005)

---

## California Childcare Health Program

The mission of the California Childcare Health Program is to improve the quality of child care by initiating and strengthening linkages between the health, safety and child care communities and the families they serve.

Portions of this curriculum were adapted from the training modules of the National Training Institute for Child Care Health Consultants, North Carolina Department of Maternal and Child Health, The University of North Carolina at Chapel Hill; 2004-2005.

Funded by First 5 California with additional support from the California Department of Education Child Development Division and Federal Maternal and Child Health Bureau.

## **LEARNING OBJECTIVES**

To describe the major oral health problems among children in early care and education (ECE) programs.

To implement prevention strategies which can decrease the prevalence of oral health problems.

To describe three ways a Child Care Health Advocate (CCHA) can assist ECE programs in meeting the oral health needs of the young children they serve.

To identify oral health resources to assist and support ECE providers and families.

## **RATIONALE**

Tooth decay and gum disease are the most common and least treated chronic diseases in children. Most oral health problems can be prevented. Good oral health in children is essential to their general well-being. For many children, dental problems get in the way of eating, sleeping, playing, learning and smiling. In California, untreated tooth decay in children is twice as common as it is in the rest of the United States. CCHAs are in a unique position to model good oral health and to educate ECE providers and families about ways to have good oral health.

# WHAT A CCHA NEEDS TO KNOW

## Why Young Children Are at Risk

- Young children depend on adults to give them good oral health care.
- Young children do not have the motor skills to brush or floss their teeth on their own until they are 8 years old (see *Handout: Fact Sheets for Families: Toothbrushing Is Important*).
- Baby bottle tooth decay (BBTD), also known as Early Childhood Caries, refers to early and severe tooth decay in infants and preschoolers. It is often caused by giving a child a bottle containing milk, formula, juice or any drink with sugar for long periods of time (see *Handout: Fact Sheets for Families: Tooth Decay in Young Children* and *Handout: Fact Sheets for Families: Dental Caries*).
- Adding fluoride to tap water has proven to be the best way of preventing tooth decay (Dental Health Foundation [DHF], 2000), but some parents may not know about this benefit and give bottled, nonfluoridated water to their children. (See *Handout: Optimally Fluoridated Areas by Zip Code*.)
- Some parents are not aware of the value of fluoride products such as toothpaste, rinses, varnish and supplements.
- Many parents tend to offer their children sweet or sticky foods, which increase the chances of cavities.
- Many families do not bring children to a dentist for preventive care because of barriers in language, money or transportation. Due to these challenges, many children do not visit a dentist until they need treatment for cavities, causing them to miss opportunities for preventive care and education.

## Issues That Arise in ECE Programs

- Monitoring and supporting oral health activities is not common in ECE programs. Also, turnover of staff and children may lead to lapses in oral health care and procedures.
- Due to lack of time, it may be difficult for ECE providers to provide oral care to each child even once a day.

- It is difficult to make sure that conditions for storing toothbrushes and other dental supplies are hygienic, and to make sure that children do not share toothbrushes.
- The timelines for weaning from a bottle or breast to a cup differ, depending on childrearing practices.
- The timelines for weaning from a sippy cup differ, depending on childrearing practices.
- If juice is used as a fruit substitute, diluted juices would interfere with the serving guidelines required by the Child Care Food Program in ECE programs. (The American Academy of Pediatrics discourages giving fruit juice to infants younger than 6 months.)
- Many ECE programs have mixed age groups, and these groups need care and education that is tailored to their developmental stages.
- Finding a dental home (a consistent dentist's office) may be difficult in areas that do not have enough providers.
- For families with a limited amount of money, with many children or with no dental insurance, it may be difficult to encourage a "dental home by age 1" policy.
- Children with disabilities and special needs may require extra staff support to carry out a good oral hygiene program (see *Handout: Health and Safety Notes: Oral Health for Children with Disabilities and Special Needs*).
- Certain bacteria in a parent's (or caregiver's) mouth may cause the child to develop tooth decay if saliva is exchanged. This saliva exchange can happen through shared utensils, shared toothbrushes or pacifiers that are "cleaned" with saliva instead of water (Featherstone, 2000). (See *Handout: Health and Safety Notes: Thumb, Finger and Pacifier Sucking*.)

## Challenges for Children and Families in ECE Programs

- **Financial hardship:** More than 25% of California's preschool and elementary school children have no dental insurance (DHF, 2000, p. 19).
- **Access:** Some families live in areas with few dental health professionals.
- **Poor nutritional choices:** Some ECE providers and parents choose to serve packaged foods that tend to be high in sugar, fat and sodium, rather

than choosing to serve healthier foods that may have to be washed, peeled or cut up, such as fruits, vegetables and cheese (see *Handout: Fact Sheets for Families: Tooth and Mouth Care* and *Handout: Fact Sheets for Families: Good Nutrition and Healthy Smiles*).

- **Shortage of dental providers (dentists, hygienists):** This is especially true for those who are trained in pediatric care.
- **Low reimbursement rates for Denti-Cal and other low-income insurance programs:** This limits the number of dental care providers who are available to low-income families.

## Fluoride

- Fluoride reduces the risk of children getting cavities by making teeth more resistant to decay. Adding fluoride to public water is the single most cost-effective way to prevent dental caries and improve oral health. Fluoride levels in tap water can vary widely within a county. The local water department is a reliable source for information about the fluoride status of a specific household's tap water. (Telephone conversation with Miguel Martinez, Community Relations Director, DHF, on July 21, 2003.)
- If fluoride has been added to the tap water, children should drink tap water via formula, diluted juices, cooked food and as a beverage.
- Besides having fluoride in the tap water, fluoride can be given to children in other ways: applied on top of the teeth (varnish), or prescribed as a tablet by a medical or dental provider (supplements).

**Varnish:** A fluoride solution that can be painted onto teeth as an adjunctive treatment for prevention of cavities; a varnish is a quick and easy way to protect children's teeth (University of California, San Francisco et al., 2003, chap. 5).

**Supplements:** If fluoride has not been added to the community water, parents should consult their medical or dental provider to ask about fluoride supplementation for children ages 6 months and older.

## Sealants

- Sealants are thin, plastic coatings placed on the biting surfaces of molars to create a barrier to food, acid and bacteria.
- School-based sealant programs can help to decrease tooth decay by as much as 60% (Task Force on Community Preventive Services, 2002).

## WHAT THE CCHA NEEDS TO DO

### Observe Programs and Assess Current Practices

Observe oral health practices of toddlers and preschoolers, such as whether fluoride toothpaste is used; whether children are assisted with brushing; how toothbrushes are stored; what meals/snacks are provided; when weaning is encouraged; and whether practices that prevent oral injury are enforced, such as those that prevent falls.

### Review Safety Policies and Procedures

- Make sure that toothbrushes are stored in a hygienic way, that toothpaste is given out in a hygienic way, that emergency contact numbers are updated, that falls are prevented and that staff are trained for dental emergencies, such as a broken tooth.
- Look for ways to improve existing practices.

### Provide Educational Materials for ECE Providers, Children and Parents

- Offer eye-catching, interesting posters for children and parents about effective practices, such as preventing BBTD, wiping infants' mouths, toothbrushing and preparing healthy meals/snacks. Encourage ECE providers to put them up in several easy-to-notice places. Tell them about National Dental Health Month (February) and the kinds of educational activities that may take place, such as the passing out of

handouts or resource lists. See *Handout: Healthy Teeth Begin at Birth* and *Handout: Fact Sheets for Families: Teething*.

- Provide a list of books, videotapes, Web sites and other resources to help educate staff, parents and children about oral health. Model the use of these materials in your work. The Childcare Health Program (CCHP; 2005) has a curriculum for health professionals and ECE providers titled *Health & Safety in the Child Care Setting: Promoting Children's Oral Health* that is an excellent resource for CCHAs and ECE providers. It can be downloaded from: [http://www.ucsfchildcarehealth.org/pdfs/Curricula/oral\\_health\\_11\\_v5.pdf](http://www.ucsfchildcarehealth.org/pdfs/Curricula/oral_health_11_v5.pdf).
- Invite dental care providers in the community to be part of “circle time” as a guest visitor.
- Give advice to parents in positive ways. For example, rather than saying “don’t let babies go to sleep with a bottle,” say “you can let babies go to sleep with a bottle if you fill it with plain water.” Instead of saying “don’t give too much juice,” say “if you wish to give juice, wait until your baby is at least 6 months old, dilute it with water to help prevent cavities and put it in a regular or sippy cup.”

## Advocate for Oral Health Prevention

CCHAs can communicate the following important prevention messages to ECE providers, parents and children in ECE programs:

- Adults can spread the germs that cause cavities. Do not put anything in a child’s mouth (such as a pacifier) if it has been in another person’s mouth.
- Children should see a dentist by their first birthday.
- Children, like adults, should brush their teeth with fluoride toothpaste twice each day: after breakfast and before bedtime at night.
- Limit how often your child has juice, sweet drinks and snacks.

## Link Programs with Health Department, Health Insurance and Other Resources

- Assist programs in linking with local dental clinics, dental schools, dental societies and sources of low-cost health insurance (such as Child Health and Disability Prevention [CHDP]) by providing a list of local resources, telephone numbers and Web sites.
- Make referrals to local dentists or dental clinics when necessary.
- Find out if there is fluoride in the county water. If so, find out if tap water is being used as a beverage, for making formula, for cooking and for diluting juices.

## Include Oral Health in Health Assessments Whenever Possible

For example, when doing the morning health check, be sure to *look* for signs of cavities/infection; *listen* for complaints; *feel* for fever or swelling around the mouth, cheeks and jaw; and *smell* for bad breath odor, which could be a sign of cavity or gum infection.

## Work with Child Care Health Consultants

- Child Care Health Consultants (CCHCs) appreciate feedback about their consultation and educational work with ECE providers, parents and community-based organizations.
- Let the CCHC know about the specific needs of the families and children you serve and ask for materials that meet those needs.
- Ask your CCHC about organizing a dental screening for the children in your program. Consider using the Caries-Risk Assessment Tool (CAT) (American Academy of Pediatric Dentistry, 2002) for screening children. See *Handout: Caries-Risk Assessment Tool* and *Handout: Notice to Parents about CAT Assessment Findings and Recommendation*.

## Cultural Implications

- Some cultures may make oral health a lower priority. In most areas of the world, dental care is still very costly and scarce, and dental health insurance is rare or not available at all.
- About 40% of preschoolers of color, as compared with 16% of white children, need dental care for existing problems.
- Some families wait much longer than the recommended age of 1 year to wean their child from a bottle. Some families use a bottle as a pacifier.
- Parents and caregivers may unknowingly spread bacteria that cause tooth decay to their children when saliva is exchanged. Saliva exchange can happen when toothbrushes or utensils are shared, saliva is used instead of water to clean pacifiers or food is pre-chewed.

## Implications for Children and Families

Tooth decay is the single most common chronic disease in children. However, some families may not put a high priority on oral health. Also, it may take years to convince some families to use preventive measures. Be sure that the education and support you provide is sensitive to the languages and cultures of the children and families in the ECE program.

## Implications for ECE Providers

ECE providers influence children, and a child's behavior can change a parent's action. The oral health of children in ECE programs can be improved by reaching out to and educating the ECE provider.





## ACTIVITY 1: SNACK FOOD SURVEY

The trainer will show you common snack foods. Please rank these common snack foods according to their potential impact on children's oral health using the following categories:

“Good” snacks (tooth-friendly, not as likely to contribute to tooth decay)

“Bad” snacks (likely to contribute to tooth decay)

## ACTIVITY 2: BRAINSTORMING: SUGAR-FREE CELEBRATIONS

Birthdays and seasonal holidays can be celebrated in a variety of ways. Young children can enjoy these events without needing to eat treats and snacks loaded with sugar. In small groups, choose special activities or goodies without sugar that preschoolers can enjoy while celebrating.

## ACTIVITY 3: MAKING A TOOTHBRUSH STORAGE SYSTEM

Toothbrushes should be stored so that they do not touch, with the bristles up, in the open air (for drying). Use the following materials and instructions to make a toothbrush storage rack.

### Materials:

- one clean half-gallon empty milk carton (a milk carton is ideal because it is not expensive and can be replaced frequently)
- one hole punch or other sharp tool for piercing the carton on one side
- a roll of tape
- a Sharpie or other permanent marker

### Instructions:

- Place milk carton on its side with the top pulled fully open.
- Punch holes for the toothbrushes—use enough space so that none of the toothbrushes will touch.
- Label each child's storage space using the sharpie pen and tape.

## **NATIONAL STANDARDS**

From *Caring for Our Children: National Health and Safety Performance Standards: Guidelines for Out-of-Home Child Care Programs, Second Edition*

1.027, 2.061, 3.010, 3.011, 5.048, 5.052, 5.095, 8.022, 8.048.

## **CALIFORNIA REGULATIONS**

From *Manual of Policies and Procedures for Community Care Licensing Division*

Title 22: Code 101221.

# RESOURCES

## Organizations and Resources

Organization and Contact Information	Description of Resources
<p>American Academy of Pediatric Dentistry (312) 337-2169 www.aapd.org</p>	<p>Professional association represents the specialty of pediatric dentistry. Brochures for parents on Web site. Online catalog for infant oral health assessment kit, videos, slides, etc.</p> <p>Informational brochures for parents: <a href="http://www.aapd.org/pediatricinformation/brochurelist.asp">www.aapd.org/pediatricinformation/brochurelist.asp</a></p> <p>Emergency Care <a href="http://www.aapd.org/publications/brochures/ecare/asp">www.aapd.org/publications/brochures/ecare/asp</a></p>
<p>American Academy of Pediatrics (847) 434-4000 www.aap.org</p>	<p>Professional association of pediatricians dedicates its efforts and resources to the physical, mental and social health and well-being of all infants, children, teenagers and young adults. Information about oral health available for parents on Web site, including Thumbs, Fingers and Pacifiers: How to Help Your Child Stop. The Caries-Risk Assessment Tool (CAT) is also available on the Web site.</p>
<p>American Dental Association ADA Kids' Corner (312) 440-2500 publicinfo@ada.org www.ada.org</p>	<p>Professional association of dentists leads a unified profession through initiatives in advocacy, education, research and the development of standards. Brochures for parents, items for children on Web site.</p> <p><a href="http://www.ada.org/public/topics/kids/index.html">www.ada.org/public/topics/kids/index.html</a></p> <p>A Message to Parents: <a href="http://www.ada.org/public/topics/parents/tips.html">www.ada.org/public/topics/parents/tips.html</a></p>
<p>California Childcare Health Program (510) 281-7913 phone (800) 333-3212 Healthline cchp@ucsfchildcarehealth.org www.ucsfchildcarehealth.org</p>	<p>Program of the University of California, San Francisco, provides staff training, parent educational materials, telephone and online support to California child care providers. Practical, research-based materials for anyone in the child care field. Most educational items are available in Spanish.</p>
<p>California Dental Association Foundation (916) 443-3382 ext. 8051 foundationinfo@cda.org www.cdafoundation.org</p>	<p>Nonprofit state-wide organization promotes oral health by producing programs that increase access to care, advancing health policy research and building a sustainable oral health workforce. Thumb Sucking: It Could Mean Big Bucks Later at <a href="http://www.cda.org/articles/thumb.htm">www.cda.org/articles/thumb.htm</a>.</p>
<p>California Department of Health Services, Office of Oral Health (916) 552-9896 www.dhs.ca.gov/oralhealth</p>	<p>State governmental organization that promotes, assures and protects oral health of Californians through organized community efforts. Web site provides scientific articles and references regarding community water fluoridation.</p>

Organization and Contact Information	Description of Resources
<p>Centers for Disease Control and Prevention (CDC)—“Brush up on healthy teeth campaign” (770) 488-5509 <a href="http://www.cdc.gov/communication/campaigns/brushup.htm">www.cdc.gov/communication/campaigns/brushup.htm</a></p>	<p>National governmental organization provides balanced public health approach. “Brush Up on Healthy Teeth Campaign” (Spanish available), started in 2002, focuses on four practical messages.</p>
<p>Child Health and Disability Prevention Program (CHDP) <a href="http://www.dhs.ca.gov/pcfh/cms/chdp/">http://www.dhs.ca.gov/pcfh/cms/chdp/</a></p>	<p>The CHDP program is a preventive health program serving California’s children and youth. CHDP makes early health care available to children and youth with health problems as well as to those who seem well.</p>
<p>Dental Health Foundation Oral Health Resource Directory for California’s Children (PDF) (510) 663-3727 <a href="mailto:tdhf@pacbell.net">tdhf@pacbell.net</a> <a href="http://www.dentalhealthfoundation.org/topics/children">www.dentalhealthfoundation.org/topics/children</a></p>	<p>Not-for-profit organization works through community partnerships to promote oral health for all by providing leadership in advocacy, education and public policy development and promoting community-based strategies.</p>
<p>First Smiles Project <a href="http://www.first5oralhealth.org">www.first5oralhealth.org</a></p>	<p>As part of the First 5 California program’s efforts to promote oral health, this Web site features a separate section for each constituent group: dental providers, medical providers, early childhood educators and parents and caregivers of young children.</p>
<p>National Maternal and Child Oral Health Resource Center Georgetown University Box 571272 Washington, DC 20057-1272 <a href="http://www.mchoralhealth.org">www.mchoralhealth.org</a></p>	<p>The purpose of the National Maternal and Child Oral Health Resource Center (OHRC) is to respond to the needs of states and communities in addressing current and developing public oral health issues. OHRC supports health professionals, program administrators, educators, policymakers and others with the goal of improving oral health services for infants, children, teenagers and their families.</p> <p>“Knowledge Path: Oral Health and Children and Adolescents” <a href="http://www.mchoralhealth.org/knwpathoralhealth.html">www.mchoralhealth.org/knwpathoralhealth.html</a></p> <p>This document provides a list of resources and publications about children’s oral health and is updated annually.</p>
<p>Nemours Foundation—Kids Health <a href="mailto:izenberg@KidsHealth.org">izenberg@KidsHealth.org</a> <a href="http://www.kidshealth.org/parent/general/teeth/healthy">www.kidshealth.org/parent/general/teeth/healthy</a></p>	<p>Created in 1995 by The Nemours Foundation’s Center for Children’s Health Media, this site provides parents, children and teenagers with up-to-date and jargon-free information.</p>

## Publications

California Childcare Health Program. (2005). *Health & safety in the child care setting: Promoting children's oral health: A curriculum for health professionals and child care providers*. Oakland: Author. Available at: [http://www.ucsfchildcarehealth.org/pdfs/Curricula/oral\\_health\\_11\\_v5.pdf](http://www.ucsfchildcarehealth.org/pdfs/Curricula/oral_health_11_v5.pdf).

Casamassimo, P. (1996). *Bright Futures in Practice: Oral Health*. Arlington, VA: National Center for Education in Maternal and Child Health. Available at [www.brightfutures.org/oralhealth/pdf/index.html](http://www.brightfutures.org/oralhealth/pdf/index.html).

## REFERENCES

American Academy of Pediatric Dentistry (2002). *Policy on use of a caries-risk assessment tool (CAT) for infants, children and adolescents*. Reference Manual 2002-2003, 15-16.

Dental Health Foundation (2000). *The oral health of California's children: halting a neglected epidemic*. Retrieved August 16, 2005, from [www.dentalhealthfoundation.org](http://www.dentalhealthfoundation.org).

Featherstone, J. (2000). *The science and practice of caries prevention*. Journal of American Dental Association, 13, 887-899.

Task Force on Community Preventive Services (2002). *American Journal of Preventive Medicine* 23. Retrieved July 21, 2003, from [www.thecommunityguide.org/oral](http://www.thecommunityguide.org/oral).

University of California, San Francisco, Alameda County Public Health Department, California Department of Health Services, Department of Pediatric Dentistry. (2003). *Healthy kids, healthy teeth: A manual for dental providers* (p. 37-54).



# HANDOUTS FOR THE ORAL HEALTH MODULE

## Handouts from California Childcare Health Program (CCHP), Oakland, CA

Page	Handout Title
15	<i>Caries-Risk Assessment Tool (CAT)</i>
16	<i>Fact Sheets for Families: Dental Caries</i>
17	<i>Fact Sheets for Families: Good Nutrition and Healthy Smiles</i>
18	<i>Fact Sheets for Families: Teething</i>
19	<i>Fact Sheets for Families: Tooth Decay in Young Children</i>
20	<i>Fact Sheets for Families: Tooth and Mouth Care</i>
21	<i>Fact Sheets for Families: Toothbrushing Is Important</i>
23	<i>Health and Safety Notes: Oral Health for Children with Disabilities and Special Needs</i>
25	<i>Health and Safety Notes: Thumb, Finger or Pacifier Sucking</i>
27	<i>Notice to Parents about CAT Assessment Findings and Recommendation</i>

## Handouts from First 5 California Oral Health Education & Training Project

Page	Handout Title
	<i>Healthy Teeth Begin at Birth (handed out as a brochure separate from this module)</i>
28	<i>Optimally Fluoridated Areas by Zip Code</i>





# CARIES-RISK ASSESSMENT TOOL (CAT) (MODIFIED FOR CCHAS)

To help identify children's level of risk for cavities and other oral problems.

The American Academy of Pediatric Dentistry, the developer of this tool (AAPD, 2002), "...encourages both dental and nondental health care providers to use CAT in the care of infants, children, and adolescents."

- The child's classification is determined by the HIGHEST risk category, which means that the presence of even one risk indicator in the high-risk category is sufficient to classify the child as being high-risk. Therefore, a child designated as low-risk would not have ANY moderate-risk or high-risk indicators.
- The CAT should be applied periodically as a child's risk status may change over time.
- CAT does not render a diagnosis. It is a tool to help the CCHC make recommendations to parents.

## Glossary:

CCHC: Child Care Health Consultant • CCHA: Child Care Health Advocate • ECE Program: Early Care and Education Program  
 Pro-cavity snacks: foods thought to promote cavities, e.g., containing a higher proportion of simple sugars

Indicator	Low risk	Moderate risk	High risk
Clinical conditions	No cavities in past 24 months  No white spot lesions (enamel demineralization)  No visible plaque, gums not swollen	Cavities in past 24 months  1 white spot  Gums swollen (gingivitis)	Cavities in past 12 months  More than 1 white spot  Visible plaque on front teeth  Pits on enamel surface
Environmental characteristics	Tap water is fluoridated  Pro-cavity snacks are eaten mostly at mealtimes at ECE program  Parent/caregiver has middle-to-high Socio-Economic Status (SES)  If child is 1 year old or older, has a "dental home" (and receives regular check-ups)	Tap water is not fluoridated but child gets fluoridated products at ECE program  Pro-cavity snacks eaten 1-2 times in ECE program outside of mealtimes  Parent has moderate SES, e.g., child qualifies for reduced or free school lunch  No dental home	Tap water not fluoridated, child doesn't use fluoridated products at ECE program  Pro-cavity snacks eaten 3 or more times in ECE program  Parent has low SES, e.g., child qualifies for Medi-Cal  No dental home
General health conditions			Child has special health care need <sup>1</sup>  Child produces excessive or deficient saliva

<sup>1</sup>Examples of special health care need include chronic physical, developmental, behavioral or emotional conditions that require health and related services beyond that required by a generally healthy child.

# Fact Sheets for Families

## Dental Caries

Dental caries (tooth decay) is one of the most common diseases of childhood. It is an infectious disease, caused by bacteria (germs), but many factors are involved in the process.

### How is tooth decay formed?

Tooth decay is a spot on a tooth where minerals have melted away and a hole has formed. This process, called demineralization, is caused by acids that are created by certain types of bacteria living in our mouths.

### Factors that can affect your child's risk for developing tooth decay

#### Family history of caries

- *History of previous caries, cavities or fillings* in children under the age of 5 places a child at high risk for future decay.
- *Areas of demineralization, bleeding gums or visible plaque on teeth* means bacteria that can cause cavities or infection of the gums are not being removed regularly.
- *Mother and family members with cavities* means that dietary practices or preventive habits need to be improved.

#### Weaning and other dietary habits

- *Feeding bottles containing something other than milk or water* (e.g., soda, juices) increase your child's risk for tooth decay.
- *High frequency of sugar containing foods* (candy, sugary foods, beverages with sugar), can increase acid production and contribute to mineral loss and tooth decay.

#### Oral hygiene and adequate fluoride

- *Poor oral hygiene* helps build up of acid producing bacteria as plaque in your child's mouth.

- *Helping your child to brush* their own teeth will ensure proper removal of plaque and development of healthy habits.
- *Fluoride toothpaste* can help prevent tooth decay by reducing the loss of minerals and reversing the demineralization process at the early stages of decay.
- *Drinking water that contains proper amount of fluoride* is an easy, safe and effective way to reduce tooth decay.

#### Special health care needs

- *Special health care needs or disabilities and medical conditions* may make it difficult for some children and their caretakers to clean their child's teeth.
- *Medicines that produce a "dry mouth" or contain high levels of sugar* put these children at higher risk for tooth decay.
- *Braces, retainers or other orthodontic appliances* often trap plaque and make it difficult to remove acid-producing bacteria.

#### Dental home and access to dental/health care

- *Regular dental check-ups* can help find decay in its early stages.
- *Fluoride treatments* by health professionals can provide protection against cavities and help repair of damaged teeth.
- *Dental sealants* are usually placed on the biting surfaces of the "back teeth" to keep plaque out and help prevent decay.
- *Caries removal/treatment* can help keep oral health in best possible condition.
- *Poverty, social deprivation and low education of parents* are examples of circumstances that may indicate barriers to accessing dental care and increased caries risk.

It is important to make sure your child's teeth stay healthy. visit [www.ucsfchildcarehealth.org](http://www.ucsfchildcarehealth.org) or call the Healthline at (800) 333-3212.

by **A. Rahman Zamani, MD, MPH**

#### References and Resources:

American Academy of Pediatrics Policy statement, Oral Health Risk Assessment Timing and Establishment of the Dental Home. PEDI-ATRICS Vol. 111 No. 5 May 2003, pp. 1113-1116. Online at <http://aappolicy.aappublications.org/cgi/reprint/pediatrics;111/5/1113.pdf>

California First Smile online at <http://first5oralhealth.org>



Provided by California Childcare Health Program  
For more information, please contact:  
Healthline 1-800-333-3212

Distributed by:

# Good Nutrition and Healthy Smiles

Good nutrition is not only necessary for general health, it also plays a key role in the development and protection of good oral health.

## Being healthy means good oral health

Oral health is essential to general health and means more than healthy teeth and the absence of disease—it means that the teeth, gums and mouth are healthy, comfortable and functional. Oral health facilitates good nutrition as well. We need healthy teeth and gums to effectively chew and swallow our food and absorb nutrients essential for the body's general health. In turn, good nutrition and healthy eating promote good oral health.

## The importance of healthy eating

Development of primary teeth starts during the second month of embryonic life, and these teeth begin to calcify before birth. Permanent teeth start to calcify just before birth and by age 8 years the crowns of all permanent teeth, except the third molar, are formed. What we eat and drink not only plays an important role in the development and protection of these teeth and gums—in fact, two of the most common diseases (tooth decay or cavities and gum disease) can be prevented by simply improving the diet. Gum disease affects the soft tissues that help support the teeth and is the leading cause of tooth loss in adults.

The following nutrients are important for good oral health:

- **Protein** is important for the formation of teeth. Malnutrition causes significant delay in eruption of primary teeth and studies suggest a relationship between early malnutrition and dental caries (under-developed teeth and under-calcified teeth are vulnerable to cavities).
- **Calcium, vitamin D, and fluoride** are needed to build strong teeth through the process called tooth

calcification. Vitamin D deficiency during childhood causes delay in appearance of the baby and permanent teeth, and creates problems in the order in which the teeth come in. Fluoride reduces dental decay by making it harder for the tooth enamel to break down, reducing the ability of bacteria to produce acid, and promoting mineral replacement.

- **Vitamins C and K** play an important role in keeping gums healthy. Vitamin C helps keep gum tissue strong and vitamin K helps control bleeding. Vitamin C deficiency affects gums and soft tissues that help support the teeth.
- **Vitamin A** deficiency during tooth formation is reported to interfere with tooth calcification and result in the incomplete development or underdevelopment of the enamel.
- **Riboflavin** deficiency results in inflammation of the tongue, and inflammation and cracking of the lips.

## Eating habits that affect oral hygiene

### Inappropriate use of a bottle

In many cases, early childhood caries is caused by children using a bottle or sippy cup with juice or other sugary drinks rather than water. This can happen when children are put to bed with a bottle, or when they drink through a bottle or sippy cup frequently during the day.

### Food that is high in sugar or starch

While children and adolescents need diets that provide them with lots of energy, this doesn't mean that they should consume soft drinks and high sugar snacks throughout the day. Food that is high in sugar or starch (especially sticky foods), hard candies, soft drinks, fruit juices, cookies, pies, cakes and potato chips are linked to higher levels of cavity-causing bacteria. They can lead to cavities because they react with bacteria on the teeth to produce acids that eat away tooth enamel.

### Frequency of eating

Besides good oral hygiene, frequency of eating is the most important factor related to dental caries. The more frequent the food intake, the greater the risk for caries, because a high frequency of eating encourages the growth of bacteria in the mouth that, in turn, leads to increased acidity in the oral cavity.

### Reference

American Academy of Pediatrics. (2004). *Pediatric Nutrition Handbook, Fifth Edition*.

Revised 11/05



Provided by California Childcare Health Program  
For more information, please contact:  
Healthline 1-800-333-3212

Distributed by:

# Teething

The time when a baby's first few teeth begin to erupt is called teething. The process by which teeth break through the surface of the gums is associated with symptoms that can be very difficult for infants and confusing for parents.

## Teeth development

When a baby is born, the first set of teeth is almost completely formed inside the jaws and under the gums. Teething usually starts between 5 and 9 months. Most children have all 20 of their primary teeth by their third birthday. Generally the two bottom front teeth will appear first, followed about 4 to 8 weeks later by the four upper teeth.

## Baby's teeth are important

Teeth not only help in chewing food, but also give your child a nice appearance, nice smile, and help in talking. The first set of teeth is also important in saving space for permanent teeth.



## Signs and symptoms of teething

Often the gums around the new teeth will swell and become tender. Teething may cause restlessness, irritability, crying, low-grade temperature, excessive drooling, disruption of eating and sleeping habits, and a desire to bite something hard or rub on the gums. The drooling that accompanies teething can cause a rash on baby's face, neck or chest. Teething does not cause serious health problems. Some parents have incorrectly blamed high fever, vomiting and diarrhea on teething, delaying proper medical attention. These are not symptoms of teething.

## Tips for easing symptoms of teething

- Gently rub or massage the gums with one of your fingers to help your baby's discomfort.
- Natural means that soothe the inflammation such as ice cubes wrapped in cloth or cold food items are also helpful.
- Teething rings are useful, but avoid the ones with liquid inside. If they break, the liquid may not be safe, or they get too hard when you freeze them, and may cause more harm than good.
- Never tie a teething ring around baby's neck. It may cause strangulation.
- Try to keep the child's face dry. Wipe it often with a cloth to remove the drool.
- If you choose over-the-counter medication, be aware that products containing benzocaine (a local anesthetic) can interfere with the gag reflex and cause your infant to choke.
- Pain relievers and medications you rub on the gums are not necessary or useful, since they wash out of the baby's mouth within minutes.
- Do not use any medications that contain alcohol, as they can be toxic.
- If symptoms continue to worsen, with interruption of sleep or feeding, your health care provider may recommend infant pain reliever like acetaminophen (Tylenol). Follow the directions. Do not give a baby child aspirin or place aspirin tablets on the gums.

## When to call for help

1. If the symptoms continue to worsen.
2. If the baby has significant bleeding of the gums.
3. If signs of gum infection such as pain, pus and excessive swelling occur.
4. If your baby seems miserable, or has a fever higher than 100 degrees, diarrhea or vomiting.
5. If the baby has high fever, diarrhea or serious sleep problems. Teething does not cause them.
6. If your child refuses to breastfeed or eat.
7. If no teeth have erupted by two years of age.

For additional information about teething and dental health contact:  
American Academy of Pediatric Dentistry at [www.aapd.org](http://www.aapd.org)  
American Academy of Pediatrics at [www.aap.org](http://www.aap.org)

by A. Rahman Zamani, MD, MPH



Provided by California Childcare Health Program  
For more information, please contact:  
Healthline 1-800-333-3212

Distributed by:

# Tooth Decay in Young Children

Dental caries (cavities or holes in teeth caused by decay) is the most common chronic childhood disease and occurs five times more often than the next most widespread disease, asthma (CDC, 2000). Early Childhood Caries, also called baby bottle tooth decay, is the term used for dental disease in infants, toddlers and preschool-age children, and may happen in children as young as 6 to 12 months.

## What causes tooth decay?

Caused by *Streptococcus mutans* and *Lactobacillus* species that are able to produce lactic acid, dental caries can spread from one person to another. Children are not born with these bacteria, but are infected some time in their early life. Usually the bacteria is passed from the mother or caregiver to the child via saliva through shared toothbrushes, utensils, cups, or pacifiers that have been “cleaned” with saliva.

## How does dental caries develop?

Four factors play roles in the development of caries: a vulnerable tooth; acid-producing bacteria; fermentable carbohydrates (sweet liquids, juice, milk, formula); and time (how long or how often teeth are exposed to sugar). Together these factors create an environment for the bacteria to multiply rapidly, and produce acids that slowly dissolve the minerals in teeth, causing tooth decay. Young children are especially at risk because they depend on adults to provide adequate oral care.

## How can you recognize dental caries?

The appearance depends on how advanced the dental caries is.

- A dull white band along the gumline is the first sign of demineralization (reduced calcium in the tooth.)
- A yellow, brown or black collar around the neck of the teeth indicates that the demineralization has progressed to cavities.
- Teeth that look like brownish black stumps indicate that the child has advanced cavities.



Provided by California Childcare Health Program  
For more information, please contact:  
Healthline 1-800-333-3212

Distributed by:

## Why be concerned about baby teeth?

Healthy baby teeth guide permanent teeth into place. For many children, tooth decay can be severe and painful and can interfere with eating, sleeping, speaking, learning and playing, and may cause low self-esteem. Treatment can be expensive and require general anesthesia.

## How can tooth decay be prevented?

As a bacterial infection caused by specific bacteria, caries is preventable. You and your child care provider can play an important role in reducing the risk of early childhood caries, protecting your child’s smile and health.

### Reduce bacterial transmission to children

- Minimize the bacteria in your mouth by brushing and flossing your teeth and visiting your dentist regularly especially when pregnant.
- Avoid saliva-to-saliva contact with your child by not sharing spoons, chewing food for your baby, or putting pacifiers in your mouth.

### Start cleaning teeth early

- As soon as your infant’s first tooth erupts, wipe it daily with a clean damp cloth. Switch to a small soft toothbrush as more teeth come in.
- Brush children’s teeth twice a day until they can brush alone (around age 4 or 5), then closely supervise to ensure proper brushing and use of toothpaste.
- Encourage swishing the mouth with water after meal to dislodge food particles from teeth.
- Take infants for a dental exam by the age of 1 year or as the first teeth emerge.

### Use care if bottle feeding

- Breastfeed your baby—it is the healthiest option and breastfed babies have a reduced risk of dental caries. If bottle feeding is necessary, take the bottle away when the child has had enough.
- Never allow the child to fall asleep with a bottle of milk, formula, fruit juice, or sweetened liquids.
- Introduce a feeding cup between age 6 to 8 months. Wean from the bottle by the first birthday.
- Encourage children to drink water rather than fruit juices or sweet drinks when thirsty.

by A. Rahman Zamani, MD, MPH

### References and Resources

*Oral Health in America: A report of the Surgeon General*, 2000  
[www.surgeongeneral.gov/library/oralhealth](http://www.surgeongeneral.gov/library/oralhealth).

*The Oral Health of California’s Children: Halting a Neglected Epidemic*, The Dental Health Foundation, 2002.

*Early Childhood Caries*, California Dental Association. [www.cda.org/articles/babybottle.htm](http://www.cda.org/articles/babybottle.htm).

rev. 10/0

# Tooth and Mouth Care

Tooth decay and gum disease are the two major oral health problems. They are the most common and least treated of childhood diseases. For many children, dental disease interferes with eating, sleeping, speaking, playing, learning and smiling. It is also responsible for children missing millions of school hours each year, especially low-income children and children of color, who have poor access to preventive dental care and are thus more vulnerable.

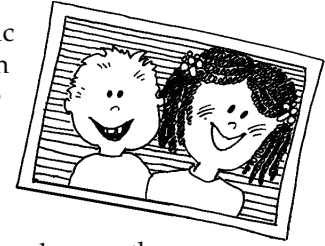
## Keeping your child's teeth healthy

The good news is that oral diseases are almost entirely preventable. Here are some tips for preventing oral disease and infections:

- Children, like adults, should brush their teeth with fluoride toothpaste twice a day—after breakfast and before bedtime at night. Remember that until age 8, children need adult help to brush thoroughly.
- Good nutrition, which is good for the body, is also good for the mouth. The most harmful foods are those containing sugar.
- Encourage children to drink plenty of water
- Take your children for regular dental visits so you can catch and correct oral/dental problems early.
- Using fluoride reduces cavities. Toothpaste and drinking water may have fluoride. Additional fluoride (supplements or varnish) is recommended for children who live in non-fluoridated areas. Discuss fluoride use with your dentist to make sure children are getting enough but not too much.



- Use of sealants (plastic coatings applied to teeth by a dentist) will help prevent tooth decay by creating a physical barrier between the teeth and plaque and food. Since permanent molars are the most at risk for decay, the six-year and twelve-year molars need sealants.
- Using mouth protectors prevents oral/dental injuries among children involved in recreational activities such as soccer, hockey, football and even bicycling and rollerblading. Stock mouth protectors are available in stores, and a better-fitting variety can be custom fitted by your dentist.
- Prevent baby bottle tooth decay—don't leave your child sleeping with a bottle that contains anything but water. Baby bottle tooth decay occurs when a child is frequently exposed to sugary liquids such as milk, including breast milk, fruit juice and other sweet liquids, and those liquids pool in the mouth behind the teeth, causing serious decay. Help your baby learn to drink from a cup; try to discontinue the use of bottles after 12-14 months.



## Dental Insurance Resources

A large number of California preschool, elementary school children and some high school students have no dental insurance. Even some of those who have medical insurance have no dental insurance. The following resources could help cover the expense of children's dental care:

- Medi-Cal: (888) 747-1222
- Transitional Medi-Cal: (888) 747-1222
- Healthy Families: (800) 880-5305
- CHDP: (510) 604-4636
- California Kids: (888) 335-8227

In addition, community-sponsored programs have programs as well. Some clinics, dental societies, nonprofit organizations, churches, dental schools and private practitioners have services that provide free or lower-cost care to families in need.



Provided by California Childcare Health Program  
For more information, please contact:  
Healthline 1-800-333-3212

Distributed by:

# Toothbrushing Is Important

Good oral hygiene is important and recommended for children of all ages and from the time their first teeth erupt. Brushing teeth removes plaque, keeps the mouth clean and healthy, and improves a child's breath and sense of taste. In addition, using toothpaste with fluoride helps fight caries (cavities) while strengthening the tooth. Recent research also shows that regular brushing may help protect your heart from bacterial infection.

## What is dental plaque?

Dental plaque is a clear, thin and sticky film composed of bacteria, food debris and salivary components. Plaque accumulates on teeth and is linked with both dental caries and gum disease. Mechanical removal of plaque by brushing is the most effective method of cleaning teeth and preventing gum disease.

## Start cleaning teeth early

**Infants.** Wipe their gums and teeth with a clean moist cloth after meals and again before bed.

**Toddlers and Preschoolers.** Start teaching them to use a toothbrush when they are about 2 years old. Young children want to hold the toothbrush and participate in toothbrushing. Since they do not have enough fine motor control, they need your help.

**School-Age Children.** Supervise and help them until age of 8—the age most children acquire fine motor skills such as the ability to tie their shoelaces or completely dress themselves.

## Brushing technique

Instruction and supervision are important to establish effective toothbrushing habits in children. Children, like adults, should brush their teeth at least twice

a day, preferably after breakfast and before bed at night.

Start by brushing their teeth for them. Place them in your lap with both of you facing the same direction, so that you can see their mouth and they feel secure. Cup their chin in your hand with their head resting against your body, and clean their teeth as you would your own. Try to clean all tooth surfaces—brush at the gum line and then behind the teeth.

Supervise children as they get older. Teach and encourage them to brush their own teeth, but keep in mind that you will need to help them for a few years. Due to their limited fine motor skills, children should scrub their teeth using small circular motions. Teach children to brush lightly (to avoid hurting their gums) and spit out the toothpaste.

## Use the right toothbrush and toothpaste

The toothbrush should be soft and child size. For infants, use a brush that is easy for the parent to hold and small enough to fit in the infant's mouth. For young children, use an appropriate-size toothbrush with a wide handle. For children with special needs and disabilities, a variety of special handles are available to make grasping easier.

Every child should have his or her own toothbrush. Use a tiny smear (pea-size amount) of fluoride toothpaste. Children usually like the taste and may eat the toothpaste, but swallowing too much fluoride can lead to the development of white spots on the teeth (dental fluorosis). Teach children to spit toothpaste out.

## When to replace toothbrushes


Replace toothbrushes every three months or more frequently if they show signs of wear, become contaminated through contact with another brush or child, or after a child has an infection. Toothbrushes should be rinsed after each use and air dried. If multiple brushes are stored in the same holder, do not allow them to touch each other.

*by A. Rahman Zamani, MD, MPH*

## Resources

First 5 Oral Health at [www.first5oralhealth.org](http://www.first5oralhealth.org).

California Childcare Health Program at [www.ucsfchildcarehealth.org](http://www.ucsfchildcarehealth.org).



**Provided by California Childcare Health Program**  
For more information, please contact:  
Healthline 1-800-333-3212

---

**Distributed by:**







# Oral Health for Children with Disabilities and Special Needs



Children with disabilities and special needs are at greater risk for health problems, require extra help and rely on others to achieve and maintain good health. Oral health is no exception. A clean mouth is one of their most important health needs for life and will be influenced by your ability to provide necessary support.

## Who are children with special needs?

Children with special needs are those who have or are at increased risk for a chronic physical, developmental, behavioral or emotional condition and who also require health and related services of a type or amount beyond that required by children generally.

## Why are they at higher risk?

Common oral problems, such as tooth decay or gum disease, affect all children. But children with disabilities and other special needs have more oral health problems than the general population. For example, children with disabilities may have impaired cognitive abilities, behavioral problems, impaired mobility, neuromuscular problems (drooling, gagging and swallowing problems), uncontrolled body movements, gastroesophageal reflux, or seizures. These complications can be barriers to adequate oral care and put them at higher risk for developing oral health problems.

## What causes oral health problems in children with disabilities?

Some contributing factors to poor oral health in children with disabilities and other special needs are:

- **Oral Conditions.** Some genetic disorders in young children can cause defects in tooth enamel, missing teeth and teeth that do not align

properly. Children with Down syndrome often suffer from gum disease.

- **Physical limitations.** Children who cannot chew or move their tongues properly do not benefit from the natural cleaning action of the tongue, cheek, and lip muscles.
- **Difficulty brushing and flossing.** Children with poor motor coordination such as spinal cord injuries, muscular dystrophy, or cerebral palsy may not be able to clean their own teeth or use the usual brushing and flossing methods.
- **Reduced saliva flow.** Children who need help drinking may drink less fluid than other children, and may not have enough saliva in their mouth to help wash away food particles.
- **Medications.** Children using sweetened medications for a long time can get tooth decay. Some anti-seizure medications may cause swelling or bleeding in the gums.
- **Restricted diets.** Children who have difficulty chewing and swallowing may often eat puréed food which may stick to their teeth.

## Which children may require special oral health care?

Children may need special oral health care if they have any of the following conditions: Down syndrome, epileptic or seizure disorders, cleft lip or cleft palate, other structural anomalies of the head, face, and/or mouth, cerebral palsy, learning or developmental disabilities, vision or hearing impairments, or HIV infection.

## When should oral health problems be suspected?

A child with special needs may exhibit any of the following signs when there is an oral health problem: grinding teeth, food refusal or a preference for

softer foods, changes in behavior such as touching in or around the mouth, teeth, jaws and cheeks, foul smelling breath, or discolored teeth.

## Which oral health problems are common?

- Tooth eruption depends on genetic factors, growth of the jaw, muscular action and medications. It may be delayed, accelerated or inconsistent. Some children may not get their first primary tooth until they are 2 years old.
- Dental caries is common in children with developmental disabilities. In addition to problems with diet and oral hygiene, prolonged bottle feeding and the adverse side effects of certain medications contribute to dental caries.
- Periodontal disease occurs more often and at a younger age in children with developmental disabilities. Overgrowth of gums caused by medications used to treat seizures, high blood pressure and weak immune systems also increase the risk for periodontal disease.
- Malocclusion (a poor fit between the upper and lower teeth and crowding of teeth) occurs in many children with developmental disabilities. It may be associated with muscular abnormalities, delayed tooth eruption, or underdevelopment of the jaw. Teeth that do not align properly can make chewing and speaking difficult and increase the risk of periodontal disease, dental caries, and oral trauma.
- Damaging oral habits can be a problem for children with disabilities and special needs. Some of the most common of these habits are grinding or clenching, food pouching, mouth breathing, tongue thrusting, picking at the gums or biting the lips.
- Tooth anomalies affect many children with disabilities. They may present with variations in the number, size and shape of teeth.
- Trauma and injury to the face and mouth from falls or accidents occur more frequently in children who have mental retardation, seizures, cerebral palsy, abnormal protective reflexes or lack of muscular coordination.

## Are special skills needed to provide appropriate oral care?

Child care providers who care for children with spe-

cial needs are also responsible to take care of their mouth. Providers need to develop a special care plan and may need to seek professional guidance or obtain appropriate training in order to care for children with disabilities and special needs. The skills needed to promote oral health are just slightly different from those required to meet the oral care needs of other young children in child care.

## Tips to remember

- Adults can spread the germs that cause cavities. Do not put anything in a child's mouth if it has been in your mouth.
- Remember that children, particularly those with disabilities and special needs, require adult help to brush their teeth thoroughly.
- If the child has a problem grasping the toothbrush, make the toothbrush easier to hold by building up the handle with tape. There are also specially shaped brushes.
- Good nutrition, which is good for the body, is also good for the mouth. Soda, sweet drinks, candy and other sweets or foods containing sugar can cause cavities.
- Using fluoride reduces cavities, so brush teeth using a pea-sized dab of fluoridated toothpaste.
- Regular dental visits are important.
- Prevent baby bottle tooth decay—don't leave a child sleeping with a bottle that contains anything but water.

For additional tips and resources on the oral health needs of young children, call the Healthline at (800) 333-3212.

## References and Resources

National Institute for Dental and Craniofacial Research at [www.nidcr.nih.gov](http://www.nidcr.nih.gov).

American Academy of Pediatrics (AAP) [www.aap.org](http://www.aap.org).

About Smiles at [www.aboutsmiles.org](http://www.aboutsmiles.org).

First 5 California at [www.first5oralhealth.org](http://www.first5oralhealth.org).

By *A. Rahman Zamani, MD, MPH (rev. 10/06)*

California Childcare Health Program • 1333 Broadway, Suite 1010 • Oakland, CA 94612-1926  
Telephone 510-839-1195 • Fax 510-839-0339 • Healthline 1-800-333-3212 • [www.ucsfchildcarehealth.org](http://www.ucsfchildcarehealth.org)



# Thumb, Finger or Pacifier Sucking

All healthy newborns start life and sustain it with an urge to suck. Embryos have been observed sucking their thumbs while in the womb. Sucking is one of a baby's inherent reflexes that is an essential ability for basic survival—if it were not present, the infant would not seek food or nourishment.

For many infants, the sucking instinct is not satisfied by feedings alone. Non-nutritive sucking, that is sucking thumbs, fingers, pacifiers and other objects, is a healthy normal behavior and offers young children a feeling of security, comfort, pleasure and relaxation during the first few years of life. This habit helps children to cope with different situations and emotions. Virtually all young children at one time or another place their fingers, fist, pacifier, thumb, or other objects in their mouth to suck. As children grow and develop, most naturally discontinue this habit.

## Thumb and Finger Sucking

Thumb and finger sucking is a natural, normal behavior for infants. Most young children suck their thumbs or fingers at some time, and it is an appropriate and useful behavior that allows them to soothe and entertain themselves. Children usually turn to their thumb or finger when they are tired, stressed, upset or bored. And it is not unusual for a thumb or finger sucker to simultaneously engage in other self-comforting behaviors like pulling at a strand of hair, touching the ear, or holding on to a favorite blanket or toy. Even when the habit lingers past infancy, thumb or finger sucking is rarely something to be concerned about. The majority of children give up such habits on their own by age 2. If children do not stop on their own, the habit should be discouraged after age 4.

## Pacifiers

Some children prefer sucking a pacifier to a thumb or finger. Pacifier use elicits strong responses from

parents and caregivers. Some oppose it because of the way it looks. Some feel that it's "pacifying" a child with an object. And others believe that using the pacifier can harm the child. But pacifiers do not cause any medical or psychological problems, and like thumb or finger sucking, using a pacifier during the early years of development generally does not permanently alter the position of the teeth or jaw. If a child wants to suck beyond what nursing or bottle-feeding provides, a pacifier will satisfy that need.

## Tips for Safe Use of Pacifiers

- Pacifiers should not be used to replace or delay meals; they should only be offered after meals or between feedings. It may be tempting to offer a pacifier to a child when it's easy for you. However, it is best to let the child decide whether and when to use it.
- Pacifiers should be of one-piece construction made with a firm nontoxic material that can be sterilized. They should have a soft nipple, air holes for ventilation, and have a shield that is wider than the child's mouth.
- *Never* tie a pacifier to a child's crib, or hang pacifiers around their neck or hands. This is very dangerous and could cause strangulation.
- *Never* dip a pacifier into honey or anything sweet before giving to a child.
- *Never* put a pacifier in your mouth to clean it before giving to a child. It spreads germs that can cause cavities.
- Do not let children share each other's pacifiers.
- Frequently check the pacifier, especially the nipple end, to make sure it has not become brittle and to see whether the rubber has changed color or is torn; discard if the nipple has become sticky, swollen, or cracked.

- Never substitute a bottle nipple for a pacifier.
- Pacifiers have a tendency to fall on the ground and children's hands are often dirty, so make sure to wash pacifiers and children's hands often with mild soap and rinse with water to limit exposure to germs.

## Thumb or Finger Sucking Versus a Pacifier

There are definitely conflicting views on this. Some feel that the pacifier may cause more dental problems, is more unsanitary, and may hinder successful breastfeeding, while others feel that breaking the pacifier habit is easier than with the thumb or finger because a pacifier can be taken away. Studies have shown that children who suck their thumbs or fingers generally have a greater difficulty breaking their habit than do children who use pacifiers.

## Should You Be Concerned?

A primary concern is to avoid dental problems that may occur if a child continues thumb, finger or pacifier sucking during the emergence of the adult (permanent) teeth, around age 5. After permanent teeth come in, thumb, finger and pacifier sucking may cause problems with the proper growth of the mouth and alignment of the teeth. According to the American Academy of Pediatric Dentistry, extensive sucking of thumbs, fingers or pacifiers has a tendency to put pressure against and push the front teeth out of alignment causing teeth to protrude. This pressure is likely to cause changes to the roof of the mouth, an open bite (vertical gap between upper and lower front teeth), or overbite (horizontal gap between upper and lower front teeth). It is possible that these conditions will self-correct, especially if the habit ceases before the eruption of the adult teeth.

Conclusively, experts agree that prolonged sucking of thumbs, fingers or pacifiers during and after the eruption of the permanent teeth can hinder proper growth and development of the teeth and gums. Sucking of the thumb or finger or use of a pacifier beyond 6 to 7 years of age can affect the shape of a child's mouth or teeth, resulting in reparative orthodontia later on. If you notice changes in the roof of the child's mouth (palate) or in the way the teeth are

lining up, then encourage the child's family to talk with their pediatrician or pediatric dentist.

## How to Help a Child Stop the Habit

Children generally forego non-nutritive sucking long before any permanent damage is done. However, some children need to be helped to stop the habit before it will cease. Attempts to steer children away from the habit can backfire if they are not tempered with positive support and guidance. Refrain from harsh words, nagging, teasing, belittling, pulling the finger or pacifier out of a child's mouth, or punishing the child to stop the behavior. These methods may upset the child, increase anxiety and stress, and worsen the habit.

- Parents and caregivers can assist children with strong emotional support through a variety of methods. Start by gradually weaning children from the habit over time. Explain that they must stop the habit in order for their teeth to come in straight.
- Children often suck their thumbs when feeling insecure or needing comfort. Focus on correcting the cause of the anxiety and provide comfort to the child.
- Have a special place for the pacifier that's out of sight, so that children must ask for it.
- Praise and reward children when they don't suck their thumb or use the pacifier. Look for times when the children do not have the thumb, finger or pacifier in their mouth, and provide words of encouragement, a pat or hug. Let them know that you are aware of the effort they are making to change the habit and that you appreciate it.
- Star charts, daily rewards and gentle reminders, especially during the daytime hours, are also very helpful.

*by Mardi Lucich, MA Revised Nov 2005*

## Reference

*American Academy of Pediatric Dentistry Fast Facts at [www.aapd.org/pdf/FastFacts02-03.pdf](http://www.aapd.org/pdf/FastFacts02-03.pdf).*

# NOTICE TO PARENTS ABOUT CAT ASSESSMENT FINDINGS AND RECOMMENDATION

## Help your child have a healthy mouth!

Dear Parent/Caregiver,

Your child's teeth and mouth were checked by \_\_\_\_\_, using the Caries-Risk Assessment Tool (CAT)\* adapted for child care settings. The CAT was developed by the American Academy of Pediatric Dentistry to help identify children who are at risk of dental problems. According to the CAT findings, your child is:

- Low risk: your child seems to have healthy teeth and gums. Keep up the good work!
- Moderate risk: your child needs dental care soon. Please ask your child's medical doctor if you need help finding a dentist.
- High risk: your child needs to visit a dentist very soon! Please ask your child's medical doctor if you need help finding a dentist. Make an appointment as soon as possible.

---

## ¡Ayude a su hijo a tener una boca sana!

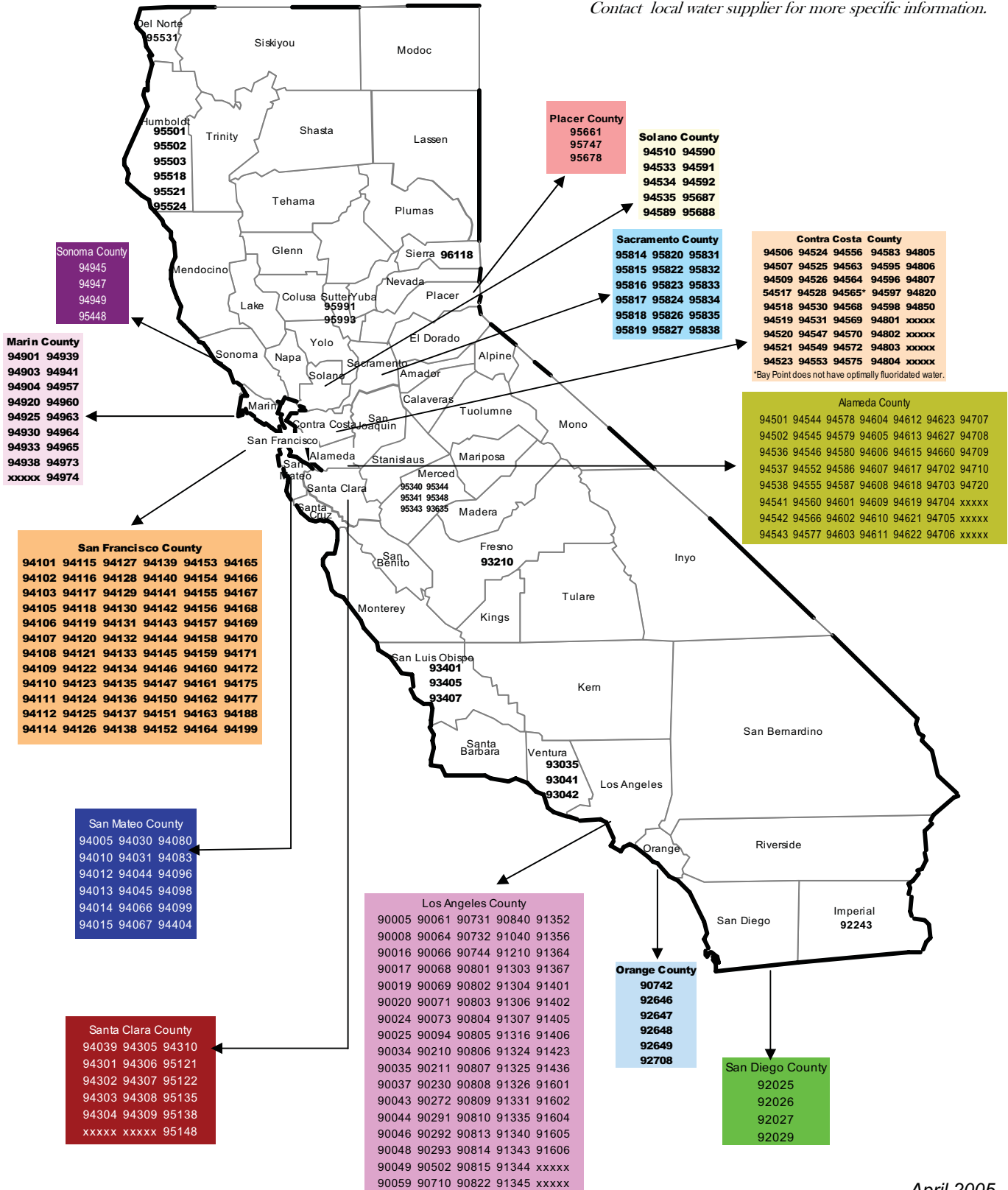
Querido padre/proveedor de cuidados infantiles:

Los dientes y la boca de su hijo(a) se examinaron el \_\_\_\_\_ utilizando un Instrumento para la Evaluación de Riesgo de Caries\* (Caries-risk Assessment Tool, CAT, por sus siglas en inglés) adaptado para centros de cuidados infantiles. La Academia Americana de Odontología Pediátrica desarrolló CAT como una ayuda para identificar a aquellos niños que corren el riesgo de tener problemas dentales. Según los resultados del examen con CAT, su hijo(a) corre un riesgo:

- Bajo: su hijo(a) tiene los dientes y las encías sanas. ¡Buen trabajo!
- Moderado: su hijo(a) necesitará cuidado dental pronto. Si necesita ayuda para encontrar un dentista, por favor, pregunte al médico de su hijo(a).
- Alto: su hijo(a) necesita ver a un dentista ¡muy pronto! Si necesita ayuda para encontrar un dentista, por favor, pregunte al médico de su hijo(a). Haga una cita tan pronto como sea posible.

# Optimally Fluoridated Areas by Zip Code

*This is a general guide, and does not include naturally fluoridated areas. Contact local water supplier for more specific information.*



April 2005