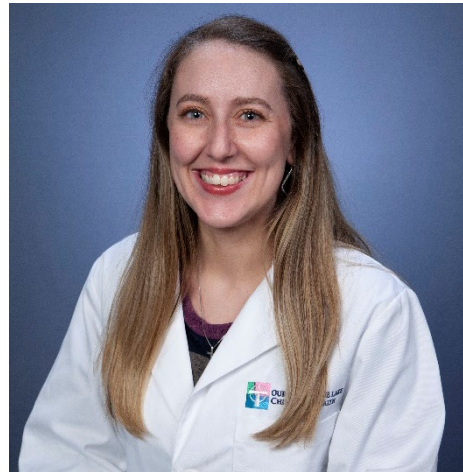


Oral Health Care in Pregnancy and the Effects on Infants

A Pediatrician's Perspective



Mikki Bouquet, MD
Our Lady of the Lake



In the past 24 months, I have NOT had any financial relationships with any ineligible companies.

Disclaimer

The Louisiana Department of Health (LDH) employees, contractors, affiliates, et al. have no actual or potential conflict- of- interest in relation to this program presentation. The content herein is intended for general guidance, not as legal advice.

Laws and regulations take priority if there are any differences. Only LDH's Secretary or Surgeon General can give official statements. LDH cannot speak for other government agencies, and if you need legal advice, you should consult a lawyer.



Objectives

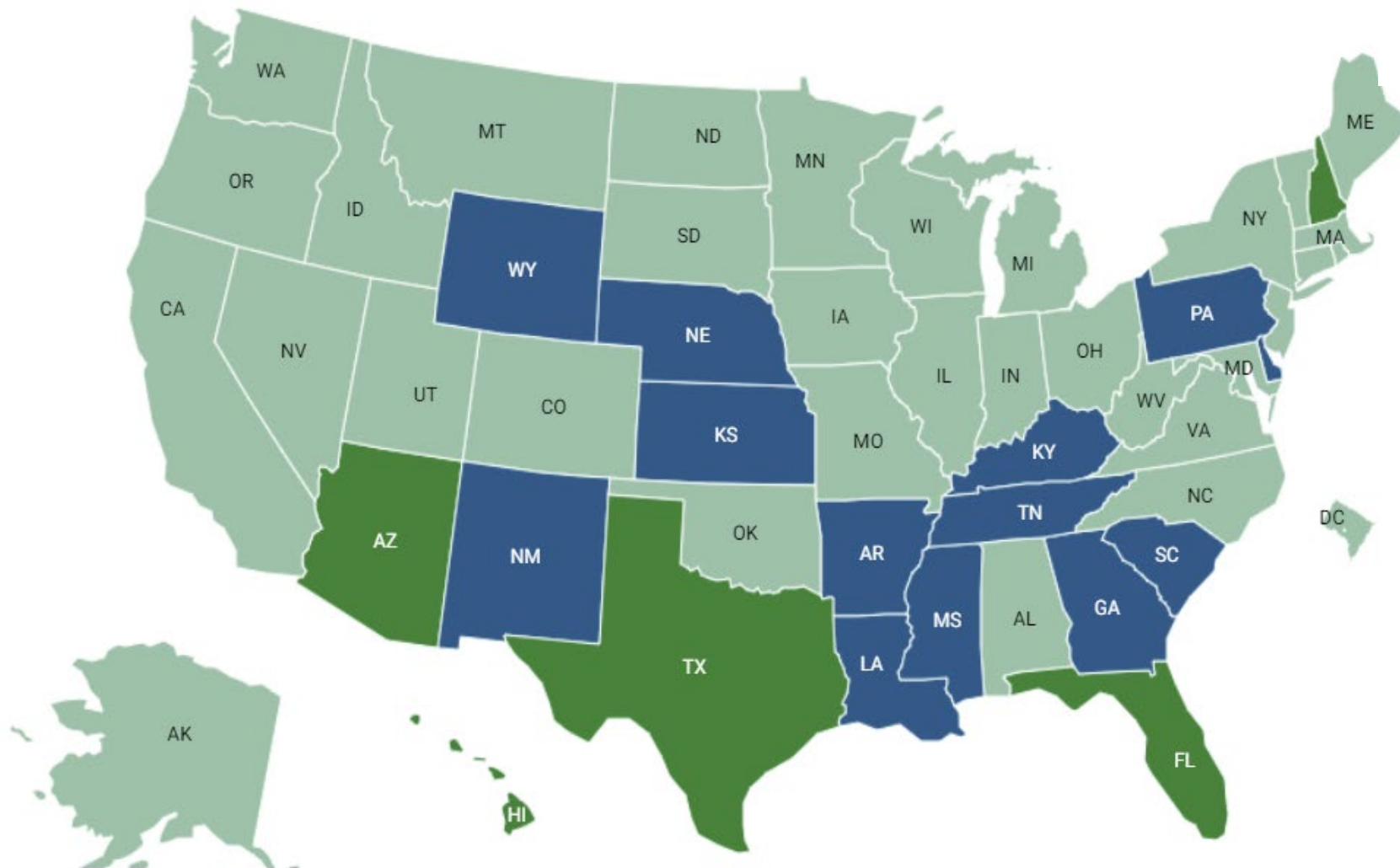
- Review on Oral Health Issues in Pregnancy
- Periodontal Disease & Adverse Pregnancy Outcomes
- Infant Health Impacts
- Medical Dental Integration

Oral Health & Pregnancy

- Louisiana Data from PRAMS (Pregnancy Risk Assessment Monitoring System) showed:
 - 41.6% had teeth cleaned during pregnancy
 - 8.4% used tobacco during pregnancy
 - 3.5% used alcohol during pregnancy
- 58% had Medicaid during pregnancy, 42% private insurance
- 24% were overweight & 34% were obese (pre pregnancy), 3% had diabetes (DM), and 6.8% had hypertension (HTN)
- 12.7% had gestational DM and 16.4% had HTN or pre-eclampsia

Dental Coverage for Pregnant Individuals

- Emergency (5 states)
- Extensive (32 states + DC)
- Limited (13 states)



Barriers to Dental Care During Pregnancy

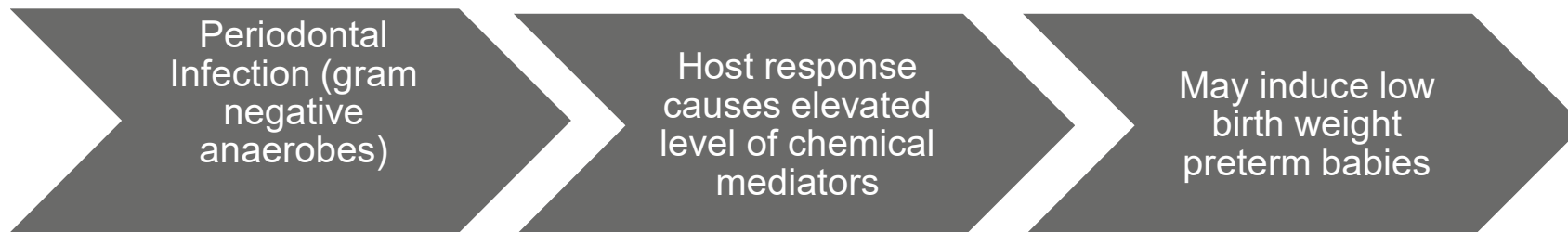
- Insufficient or no dental insurance coverage
- Fear of treatment
- Low health literacy
- Belief that treatment is unsafe during pregnancy
- Low self-efficacy in caring for one's teeth and gums
- Inconsistent knowledge of perinatal oral health across providers
- Low rate of referrals to oral healthcare professionals from PCP's/OBGYN's

Periodontal Disease and Adverse Pregnancy Outcomes

Direct Mechanism: Bacteremia



Indirect Mechanism: Systemic Inflammatory Response



Now you're brushing for two



WHEN YOU'RE PREGNANT
YOU MAY BE MORE PRONE TO

**GUM DISEASE
AND CAVITIES**



After your baby is born,
you could pass the
bacteria that contributes
to cavities from your
mouth to hers.



THAT'S WHY
**EVERY PREGNANT WOMAN
NEEDS TO GET A
DENTAL CHECK-UP**

**MAKE YOUR APPOINTMENT
BEFORE THE BABY COMES**



ONCE SHE COMES,
WE'RE GUESSING YOU'LL
BE PRETTY BUSY



Tips to keep your
mouth healthy



IF YOU HAVE
**MORNING
SICKNESS,**
RINSE YOUR MOUTH WITH
ONE TSP OF BAKING SODA
IN A GLASS OF WATER
AFTER YOU GET SICK.



BE SURE TO
**BRUSH TWICE A DAY
AND FLOSS DAILY**

Periodontal Disease & Adverse Pregnancy Outcomes

Family Practice, 2021, 718–723
doi:10.1093/fampra/cmab037
Advance Access publication 26 June 2021



Health Service Research

Association between maternal periodontal disease and adverse pregnancy outcomes: an analysis of claims data

Sung Eun Choi^{a,*}, Abhishek Choudhary^b, John M Ahern^a,
Nathan Palmer^c and Jane R Barrow^b

^aDepartment of Oral Health Policy and Epidemiology, Harvard School of Dental Medicine, Boston, USA, ^bOffice of Global and Community Health, Harvard School of Dental Medicine, Boston, USA and ^cDepartment of Biomedical Informatics, Harvard Medical School, Boston, USA

*Correspondence to SE Choi, Department of Oral Health Policy and Epidemiology, Harvard School of Dental Medicine, 188 Longwood Avenue, Boston, 02115, MA, USA; E-mail: sung_choi@hsdm.harvard.edu

Abstract

Background: While a number of studies have explored the link between periodontal disease and adverse pregnancy outcomes, both epidemiological studies and intervention trials have reached contradictory results with relatively small sample sizes. Utilizing large-scale claims data, we aim to investigate the association between maternal periodontal disease and adverse pregnancy outcomes.

Objective: Utilizing large-scale claims data, we aim to investigate the association between maternal periodontal disease and adverse pregnancy outcomes.

Methods: Using de-identified claims data from a national commercial insurer in the USA, records of all observed pregnancies from 2015 to 2019 were included in this retrospective cohort study. Adverse pregnancy outcomes, including low birthweight (LBW) of the newborn, preterm birth (PTB) and spontaneous abortion, were primary outcomes. To evaluate the association between periodontal disease and pregnancy outcomes, logistic mixed-effect model was estimated with periodontal disease status, age, existing clinical conditions of mothers and geographic location as covariates.

Results: Out of 748 792 observed pregnancy records, 18.66% resulted in adverse pregnancy outcomes; 5.92% in LBW, 14.46% in PTB and 2.22 % in spontaneous abortion. Adjusting for individual-level risk factors, periodontal disease was significantly associated with maternal complications with odds ratios of 1.19 (95% CI:1.15, 1.24) for any adverse pregnancy outcomes, 1.10 (95% CI:1.03, 1.17) for LBW, 1.15 (95% CI:1.10, 1.19) for PTB and 1.34 (95% CI:1.23, 1.46) for spontaneous abortions.

Conclusions: Maternal periodontal disease may be associated with an increased risk of maternal complications and neonatal morbidity. A timely diagnosis and treatment of periodontal disease during pregnancy should be encouraged by considering oral health as part of routine prenatal care.



Periodontal Disease & Adverse Pregnancy Outcomes

Out of 748,792 observed pregnancy records, 18.66% resulted in adverse pregnancy outcomes:

5.92% in low birth weight

14.46% in preterm birth

2.22 % in spontaneous abortion

	odds ratio (95% CI)
Any adverse pregnancy outcomes	1.19 (1.15 – 1.24)
Low birthweight	1.10 (1.03 – 1.17)
Preterm birth	1.15 (1.10 – 1.19)
Spontaneous abortion	1.34 (1.23 – 1.46)



December 19, 2022

Association of Chlorhexidine Use and Scaling and Root Planing With Birth Outcomes in Pregnant Individuals With Periodontitis

A Systematic Review and Meta-analysis

Anwar T. Merchant, DMD, ScD¹; Rajat Das Gupta, MBBS¹; Maxwell Akonde, MBBS¹; [et al](#)

» [Author Affiliations](#) | [Article Information](#)

JAMA Netw Open. 2022;5(12):e2247632. doi:10.1001/jamanetworkopen.2022.47632

Key Points

Question Is treating pregnant individuals with periodontitis with chlorhexidine mouthwash plus scaling and root planing associated with birth outcomes?

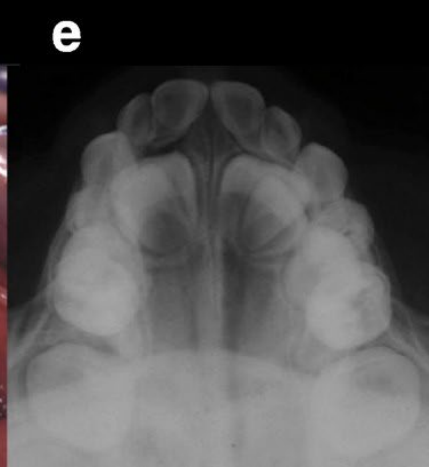
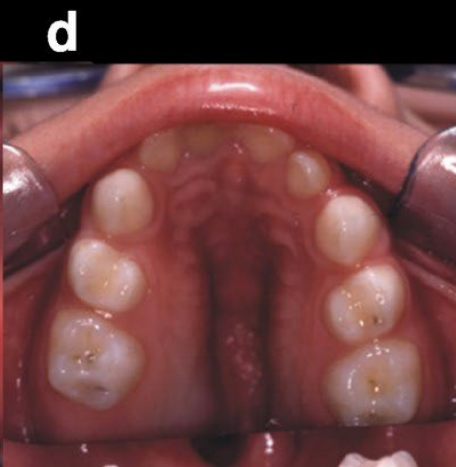
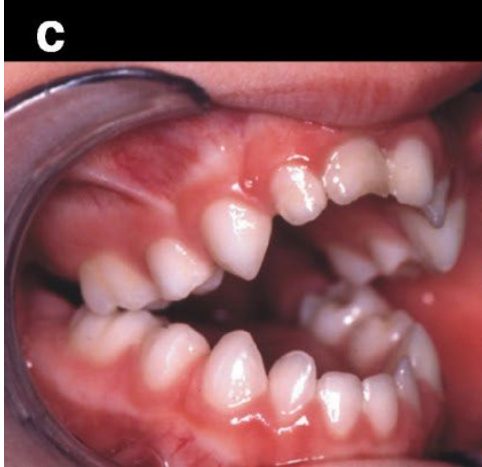
Findings In this systematic review and meta-analysis including 12 studies with 5735 participants, chlorhexidine mouthwash plus scaling and root planing, but not scaling and root planing alone, was associated with reduced risks of preterm birth and low birth weight.

Conclusions and Relevance These findings suggest that treating maternal periodontitis with chlorhexidine mouthwash plus SRP was associated with reduced risk of preterm and low birth weight. Well-conducted RCTs are needed to test this hypothesis.

Preterm Infants & Dental

- Higher rates of dental problems compared to peers
- Majority of calcium and phosphorus accumulate in the 3rd trimester
- Enamel hypoplasia
 - Enamel chipping can occur during intubations in NICU
- Preterm infants have a higher risk of developing hyperbilirubinemia which can cause tooth discoloration
- Palatal groove, jaw asymmetry & dental occlusion can occur due to intubations → overcrowding → braces
- Delayed tooth eruption
- Impacts on nutrition and long-term feeding (ex: oral aversions, poor attachment, night feeding)
 - Lower rates of breastfeeding
 - Higher rates of bottle feeding at 18-24 months
 - Delayed 1st dental visit





Protect Tiny Teeth Implementation Guide



Lessons learned from quality improvement projects to integrate oral health into prenatal and pediatric settings.

"The biggest success of this project was capturing pregnant women who had serious dental issues that would not have brought them up if I had not asked. We got to start those conversations and get those patients into the dental care they so desperately needed."

— Family medicine provider at an Indian Health Clinic

Effects on Infants

- Healthy teeth and gums impact pregnancy which can impact baby
- Cavity-causing bacteria can pass to their children
 - Children are 3x as likely to have tooth decay if mothers have tooth decay
- Screen during pregnancy for chronic and acute oral issues
- Educate on importance of oral health for their families and refer to dentistry

Dental Care During Pregnancy

is **Safe and Important**

A healthy mouth for mother, a healthy start for baby



Coach women during pregnancy about how the condition of their teeth and mouth can impact their children's risk for tooth decay



Untreated gum disease in pregnant women can harm their systemic health and may be linked to low birth weight/preterm births



Mothers can unintentionally pass cavity-causing bacteria to newborns, increasing children's risk for tooth decay



Children are more than **3x as likely** to have tooth decay if their mothers have high levels of untreated tooth decay

4 Ways Pregnant Women Can Give Their Newborns a Healthy Start



Make and keep regular dental appointments



Brush with fluoride toothpaste at least 2x daily



Drink fluoridated tap water every day



Talk to a dentist or doctor about ways to prevent or manage dental problems

Screening Pregnant Women

- Do you have any oral health issues?
 - Yes → referral immediately
- When was the last time you saw a dentist?
 - >6 months → referral
 - <6 months → remind patient to see dentist at 6 month mark



Now, you're brushing for two.

When you're pregnant you may be more prone to gum disease and cavities – and having them can impact your baby's health. Get a dental check-up before delivery.

If you don't have a place to go, ask your healthcare provider for a recommendation and make an appointment today.

Learn more at
HealthyChildren.org/tinyteeth

American Academy
of Pediatrics
DEDICATED TO THE HEALTH OF ALL CHILDREN™

Effects on Infants/Children

- Dental caries is the most common chronic disease of childhood
- It affects half of all children but disproportionately impacts low-income children and children of color
- Prevention is key!
 - Early dental education
 - Establish a dental home
 - Downstream effect → reduces risk of a chronic, lifelong poor oral health

Milestones for mini mouths



BACTERIA FROM YOUR MOUTH CAN PASS TO YOUR BABY'S MOUTH SO PART OF TAKING CARE OF YOUR NEWBORN'S MOUTH IS **CARING FOR YOUR OWN ORAL HEALTH**



BRUSH YOUR TEETH TWICE A DAY, CLEAN BETWEEN YOUR TEETH, AND **GET A DENTAL CHECK-UP EVERY 6 MONTHS**



YOU'RE BEGINNING TO SEE THAT **ADORABLE SMILE**



START PROTECTING IT BY WIPING HIS GUMS WITH A SOFT, CLEAN CLOTH AFTER EACH FEEDING



BABY IS CUTTING HIS FIRST TOOTH **START BRUSHING THAT TOOTH TWICE A DAY** USING A SMEAR OF TOOTHPASTE



WHEN BABY IS READY FOR SOLID FOOD **CHOOSE THINGS WITH NO ADDED SUGAR**



MAKE SURE YOUR BABY HAS A **DENTAL CHECK-UP BY HIS FIRST BIRTHDAY**

If you don't have anywhere to take your baby, ask your pediatrician to check his teeth and for a dental referral.





Medical Dental Integration

Pediatric medical-to-dental care referral form

Patient Information

Patient Name: _____ DOB: ____ / ____ / ____

Parent/Guardian: _____ Height: _____

Telephone: _____ Weight: _____

Medical Professional Information

Pediatric Care Professional: _____ Date: ____ / ____ / ____

Telephone: _____ Fax: _____

Signature: _____

Follow-Up Request

This patient is being referred for a dental evaluation and care in a dental home. If this patient requires sedated care, please contact our office to discuss next steps. Until this child can be seen regularly by a dental professional, our office will provide periodic oral health screenings, oral hygiene guidance, and fluoride varnish/supplementation as needed. *Please indicate if this child was seen in your office by faxing our office a short note with information regarding the visit and a follow-up plan. Thank you.*

Referral Information for Dental Professional

Reason for Referral: Immediate care needed Abnormal oral screening Routine dental care

Other, please describe

Concerns: _____

Describe conditions that could affect their receipt of routine or restorative dental care that could require anesthesia:

Known Allergies: _____

(continued on back)

Medications Patient is Currently Taking:

Significant Medical Conditions: None Yes (specify)

Teeth Present: None Yes

Oral Exam Findings: Good oral health White spots or obvious dental caries Gingivitis

Other, please describe

Notes:

Does someone brush the child's teeth daily? Yes No Don't know

Does the child use toothpaste with fluoride? Yes No Don't know

Does the child go to bed with a bottle or cup? Yes No Don't know

Was fluoride varnish applied? Yes, Date _____ No Don't know

Were fluoride supplements prescribed? Yes, Date _____ No Don't know

Other oral health concerns:

Dental Professional Information

This child has been referred to

Dental Professional Name: _____

Telephone: _____ Fax: _____

Questions about how to pay for dental care? Call your dental benefits professional or get information about coverage at insurekidsnow.gov or by calling 2-1-1.

All rights reserved. The recommendations in this publication do not indicate an exclusive course of treatment or serve as standard medical care. Variations, taking into account individual circumstances, may be appropriate. The information contained in this publication should not be used as a substitute for the medical care and advice of your professional. There may be variations in treatment that your professional may recommend based on individual facts and circumstances. Listing of resources does not imply an endorsement by the American Academy of Pediatrics (AAP). The AAP is not responsible for the content of external resources. Information was current at the time of publication. Products and Web sites are mentioned for informational purposes only and do not imply an endorsement by the American Academy of Pediatrics. Web site addresses are as current as possible but may change at any time. This poster is supported by the Grant or Cooperative Agreement Number, 5U19CE000167-04-01, funded by the Centers for Disease Control and Prevention (CDC). Its contents are solely the responsibility of the authors and do not necessarily represent the official views of the CDC or the Department of Health and Human Services. The American Academy of Pediatric Dentistry, American College of Obstetricians and Gynecologists, American Dental Association, and the American Dental Hygienists' Association support the value of this clinical document as an educational tool, April 2019. © American Academy of Pediatrics 2019.

American Academy
of Pediatrics



DEDICATED TO THE HEALTH OF ALL CHILDREN[®]



6 Questions Most Women Have About Oral Health and Pregnancy

Q: Is it safe to have a dental visit while pregnant?

A: Yes! In fact, it's recommended. Morning sickness and hormonal changes can make you more prone to gum disease and cavities when you're pregnant, which can impact your baby's health. A dentist can treat these problems or help you avoid them.

Q: At what point in my pregnancy should I have a dental check-up?

A: Get a dental check-up before your delivery. If your last visit was more than six months ago, or you have any oral health issues, schedule an appointment as soon as possible.

Q: What information should I tell my dentist about my pregnancy?

A: Tell your dentist that you are pregnant and your due date. Also be sure they are aware of any medications you're taking, specific medical conditions, any form of tobacco or drug use, or if your pregnancy is high-risk.

Q: What about dental treatments – are they safe while pregnant?

A: Yes. X-rays, local anesthetics and most pain medication are safe as long as the dentist is aware of your pregnancy.

Q: What steps should I take to prevent oral health problems during pregnancy?

A: Be sure to brush twice a day with fluoride toothpaste, clean between your teeth, get a dental check-up, and limit sugary foods. If morning sickness occurs, rinse your mouth with one tsp of baking soda in a glass of water.

Q: Why is my oral health important to my baby after she is born?

A: Moms and babies share everything – including bacteria. If you have cavities, you also have the bacteria that cause them in your mouth. This bacteria can be passed from your mouth to your baby's mouth and increase her risk of cavities, too – so it's important to get a dental check-up and establish a healthy smile before the baby is born.



6 Questions Moms Have About Caring for An Infant's Mouth

Q: What can I do to take care of my baby's mouth before her teeth break through?

A: Whether you breast or bottle feed, wipe your baby's gums after each feeding and before bedtime. Keep taking care of your own oral health and avoid cleaning pacifiers with your mouth.

Q: What should I do when my baby begins teething?

A: Try to soothe your teething baby by rubbing the gums with a clean finger or allowing her to chew on a clean, moist washcloth. You can also ask your doctor to recommend a safe teething ring. Teething doesn't usually cause a fever, rash or diarrhea. If your baby has these symptoms call your pediatrician.

Q: What do I do if my baby falls asleep with a bottle while feeding?

A: Infants may fall asleep with a bottle in their mouth while they are being fed. If this happens, try to wipe their gums with a soft, clean cloth. This helps wipe away sugar and bacteria that together can cause cavities. Avoid putting her down with a bottle.

Q: When should I begin brushing her tiny teeth?

A: Begin brushing as soon as the first tooth appears. Be sure to brush twice a day using a small smear of toothpaste (the size of a grain of rice).

Q: When should I schedule my baby's first dental visit?

A: Your baby should see a dentist after their first tooth appears, but no later than their first birthday. If you need help finding a pediatric dentist or a dentist trained to treat children, ask your pediatrician for recommendations or visit insurekidsnow.gov.

Q: Are baby teeth important?

A: Yes, it is important to keep baby teeth cavity free even though they will eventually fall out. Baby teeth help children to eat healthy food, develop their speech, and maintain space for their adult teeth. Bacteria that cause cavities in baby teeth stay in the mouth and may cause cavities in permanent teeth.

Questions?

- My contact:
mikki.bouquet@gmail.com

Protect Tiny Teeth

You may not see them yet, but your baby's teeth are hiding right beneath the gums.



Thank you!