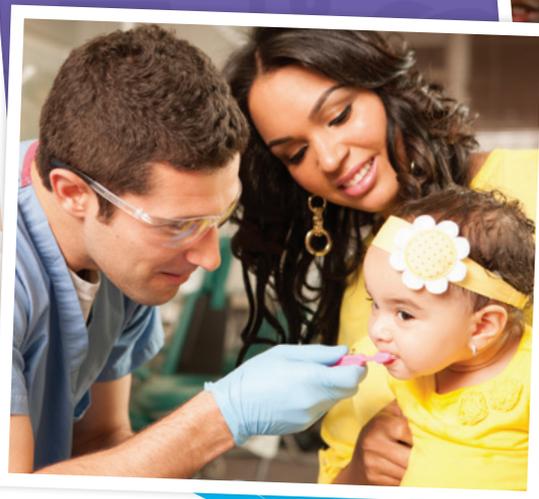


.... Good Dental Health ....

# A PARTNERSHIP Between You & Me

.....

Buena salud dental  
Una asociación entre usted y yo



## TeethFIRST!

Creating healthy smiles for a lifetime.

Learn More at [TeethFirstRI.org](http://TeethFirstRI.org)

Más información en [PrimerLosDientes.org](http://PrimerLosDientes.org)

# ACKNOWLEDGMENTS

Supported by funding from the DentaQuest Foundation through its Oral Health 2014 and Oral Health 2020 Initiative, *TeethFirst!* seeks to promote early dental visits by developing a sufficient dental provider network for young children, encouraging parents to take their child to the dentist, and establishing a well-trained and welcoming dental home for all Rhode Islanders.

Special thanks to Marie Jones-Bridges, CDA, RDH-PHDH, BS; the Perinatal and Infant Oral Health Quality Improvement Initiative partners (Sadie DeCourcy, JD; Laurie Leonard, MS; Jennifer Levy, MD; Lisa Littman, MD, MPH, FACOG; Samuel Zwetchkenbaum, DDS, MPH); Rhode Island KIDS COUNT (Jim Beasley, MPA; Jill Beckwith, MPH; Katy Linwood Chu); RI Dental Hygienists' Association (Gwen Dominick, RDH); Samuels Sinclair Dental Center at RI Hospital (Cynthia Johnson, CDA, RDH, BS, MA, Dental Hygienist), and St. Joseph Pediatric & Family Dental Centers (Maureen Ross, RDH, BS, Education Coordinator) for their efforts in developing this flipchart.

**For more information about TeethFirst!, check out [TeethFirstRI.org](https://TeethFirstRI.org)**

**For additional copies of this flipchart, please contact [Info@TeethFirstRI.org](mailto:Info@TeethFirstRI.org).**

This project was supported by the Health Resources and Services Administration (HRSA) of the U.S. Department of Health and Human Services (HHS), grant number: H47MC28477. Information, content and conclusions are those of the author and should not be constructed as official position or policy of, nor should any endorsements be inferred by HRSA, HHS, or the U.S. Government.

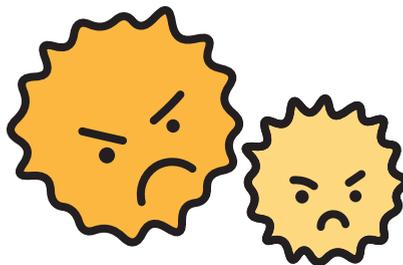
# How does a cavity form?

¿Cómo se forman las caries?



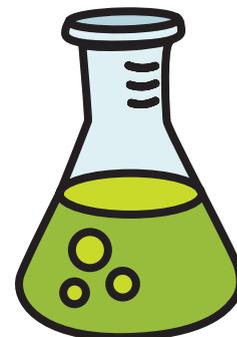
Carbohydrates  
Carbohidratos

+

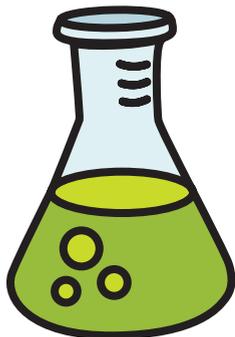


Bacteria  
Bacteria

=

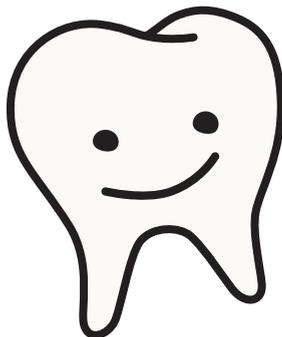


Acid  
Ácido



Acid  
Ácido

+



Healthy Tooth  
Diente saludable

=



Cavity  
Caries

# How does a cavity form?

Dental caries is a multifactorial process. One factor alone will not result in tooth decay.  
Basic elements for caries formation:

1. Susceptible tooth surface
2. Bacteria (mainly Mutans streptococci, lactobacillus) in plaque
3. Sugars, starches, other fermentable carbohydrates
4. Time. Eating and drinking sugars /carbohydrates leads to acid production > rapid drop in pH (pH returns to normal in 20-40 minutes)

SUGAR/STARCH + GERMS = ACID

ACID + TOOTH = DECAY / CAVITY

---

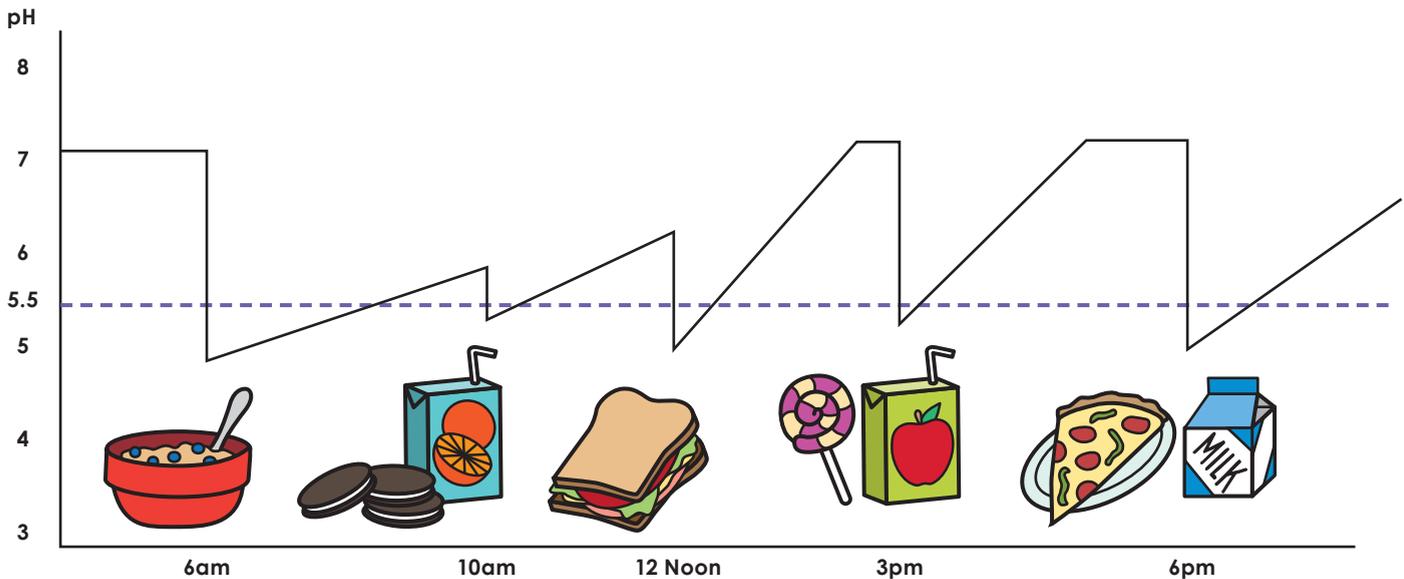
## PARENT ADVICE

---

- Dental caries is an infectious disease that can spread easily within a family. Don't share food, utensils, toothbrushes or clean baby's pacifier with your mouth.
- Early decay (opaque, white spots) can be reversed (remineralization) with fluoride.
- Limit intake of sugary/starchy foods. A high sugar/carbohydrate diet allows bacteria to thrive and produce acids that breakdown tooth structure > tooth decay.
- Offer juice/other sweetened beverages at meal time only.
- Clean baby's teeth and gums at least twice daily (after breakfast and before bed).

# It's not just what, but how and how often

No es solamente **qué**, sino **cómo** y cada **cuánto**



**Meals allow time for acid level (pH) to recover; frequent snacks keep acids at a high level that can cause decay**

Las comidas permiten tiempo para que se recupere el pH; los frecuentes refrigerios mantienen el alto nivel de ácidos que pueden causar las caries

# It's not just what, but how and how often

A diet high in fermentable carbohydrates is cariogenic. A higher intake of cariogenic foods and more frequent consumption increase caries risk. Children's diets should include a variety of nutrient-dense foods. Diets high in protein, dairy products, fruits and vegetables can protect against tooth decay. The "*Nutrition Facts*" label on food packaging can help parents identify hidden sugars that may damage teeth. Snacks with greater nutritional value can aid a child's growth and development.

---

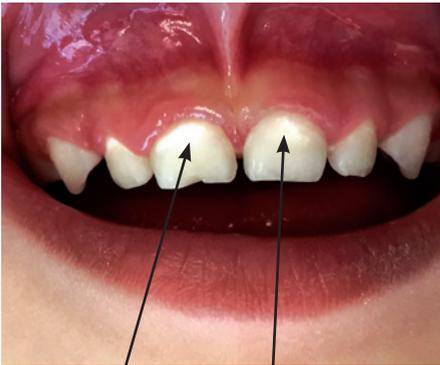
## PARENT ADVICE

---

- After sugary/starchy meals or snacks, germs in your child's mouth make acids that last 20-40 minutes. This called an **ACID ATTACK!**
- Many meals/snacks a day cause many **ACID ATTACKS** and increase your child's risk for tooth decay.
- Beware of hidden sugars in "healthy foods." Read food labels to be sure of sugar content in your child's diet.
- Even healthy foods (milk, juice) when consumed throughout the day in a sippy cup or bottle can be harmful.
- Small changes like offering sweets or juice at meal time only can reduce caries risk.
- Healthy snacks like carrots, apples, celery with peanut butter and nuts are good substitutes for candy, cookies and chips.
- Do NOT put baby to bed with a bottle containing anything but water. To calm baby, try singing, rocking or holding baby.

# What is Early Childhood Caries (ECC)?

¿Qué son las caries de la primera edad  
(ECC por sus siglas en inglés)?



White Spots  
Manchas blancas



# Early Childhood Caries (ECC)

**Definition:** Presence of 1 or more decayed (noncavitated or cavitated lesions), missing (due to caries), or filled tooth surfaces in any primary tooth in a child 71 months of age or younger. In children younger than 3 years, any sign of smooth-surface caries is indicative of severe early childhood caries (S-ECC). (*American Academy of Pediatric Dentistry*)

Children should be assessed for ECC risk by their first birthday. Risk level determines frequency of future preventive, treatment or disease management visits. Children at high risk may require monthly preventive/restorative visits until the disease is under control. A standardized caries risk assessment tool allows providers to develop a comprehensive profile of each child's risk and encourages parents to share information about their child's habits without placing blame or making judgments.

---

## PARENT ADVICE

---

- Primary “baby” teeth are important—they help children eat, speak, sleep well, focus on learning without pain, save space for adult teeth, and smile! Healthy baby teeth are white and shiny. Gums are pink, hug the tooth tightly and don't bleed.
- ECC can develop quickly and cause many problems for your child and you - pain, difficulty sleeping or learning, poor general health, increased risk of decay in permanent teeth, poor self esteem, costly repair requiring hospitalization and treatment under general anesthesia.
- ECC usually starts in upper front teeth but progresses to baby molars and lower front teeth when left untreated.
- **Caused By:** Bedtime/naptime bottle with anything but water, sleeping all night at the breast, using a bottle as a pacifier, dipping a pacifier in anything sweet (sugar, honey), allowing child to keep a bottle or sippy cup in his mouth throughout the day.
- **Prevention Tips:** Hold baby when feeding (don't prop bottle), don't use bottle as a pacifier, use bottle only for feeding (formula, breast milk or water). Don't put juice/other sweet beverage in baby's bottle. Start baby using a cup at 6-9 months of age (when able to sit unsupported). Wean baby off bottle by first birthday (be patient, this takes practice). Clean baby's teeth as soon as they come in. Clean teeth just before baby's bedtime every night.

# Feeding Practices: Nutrition & Beverages

## Prácticas alimenticias: Alimentos y bebidas

Good Choice  
Buenas opciones



Juice Amounts  
Cantidades de jugo



Before 6 Months Old: No Juice  
1-6 years: Maximum 4-6 oz juice per day  
Antes de los 6 meses de edad: Nada de jugo  
1 A 6 años: Máximo de 4 a 6 onzas de jugo por día

Poor Choice  
Pobre opción



# Feeding Practices: Nutrition & Beverages

Healthy foods and beverages are needed for healthy teeth and gums. Establish good eating habits from an early age.

---

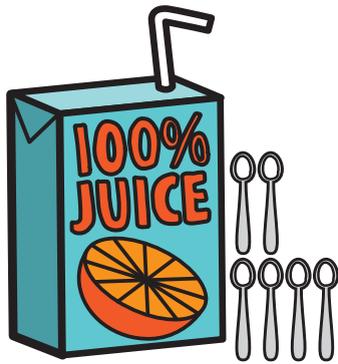
## PARENT ADVICE

---

- Set regular meal/snack times. Offer a variety of foods from the food groups. Avoid or limit sweets to mealtimes or as an occasional treat.
- Number of cavities your child gets depends on what they eat, how many times a day, and how long the food remains in the mouth. Frequent eating/snacking without cleaning the teeth can increase your child's risk for tooth decay. Drink/rinse with water after eating if brushing is not possible.
- Very important to brush child's teeth after eating sticky foods (candy, raisins, dried fruit, jelly/jam, crackers, soft bread).
- **Beware of Hidden Sugars:** Commercial baby formula, ketchup, spaghetti sauce, peanut butter, vitamin/sports/energy drinks.
- **Better Choices:** Breastfeeding, offer water when your child is thirsty (water neutralizes acids), encourage your child to eat alkaline foods (apples, avocados, broccoli, carrots, celery, spinach).
- **Remember:** Every time a child has sugary foods or drinks = 20-40 minutes of acid exposure

# What's Your Child Drinking?

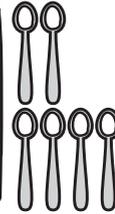
¿Qué bebe su hijo?



8oz Juice : 25gm  
8oz de jugo : 25 gm



12oz Soda : 39gm  
12oz de gaseosas : 39 gm



8oz Punch : 25gm  
8oz de ponche : 25 gm



8oz Chocolate Milk : 24gm  
8oz de leche chocolatada : 24 gm



12oz Sport Drink : 25gm  
12oz de una bebida deportiva : 25 gm



8oz Pediasure : 25gm  
8oz de Pediasure : 25 gm



8oz Energy Drink : 54gm  
8oz una bebida para tener energía : 54 gm



16oz Frozen Coffee Drink : 64gm  
16oz de una bebida con café congelada : 64 gm

# What's Your Child Drinking?

Weaning a baby by their first birthday is important to their oral health. Prolonged bottle or sippy cup use increases caries risk. Transitioning baby from bottle to cup takes patience and practice. Choose beverages wisely to avoid unnecessary exposure to sweetened beverages that cause decay and may not provide optimal nutrition.

---

## PARENT ADVICE

---

- Start weaning early. Baby will learn to hold a cup and put it in his mouth by playing with it. When baby is able to hold the cup, put a small amount of formula/milk in the cup at meal time. Let baby hold the cup and learn to drink independently. Give baby more in the cup over time.
- Take bottle away gradually. Set a goal of having baby drinking only from cup by age 1. Have baby throw bottles away when she's ready.
- Beware of hidden sugars in many drinks (hidden sugars = acid exposure).
- 3-4 teaspoons of sugar = 100% of recommended daily intake for preschoolers (*American Heart Association*)
- 1 teaspoon = 4 grams of sugar
- Sugar in all forms is highly acidic
- Labels contain nutritional content but not levels of acid
- Acid can erode surface of teeth-making decay more likely
- Tooth enamel begins to be destroyed when acid level in the mouth drops below 5.5
- Neutral pH is 7 and strong acid is 1

# Seal Away Tooth Decay

Sellar previene la carie dental

1



Teeth with deep grooves hold food and germs that can cause cavities

Los dientes con surcos profundos retienen alimentos y gérmenes que pueden causar caries

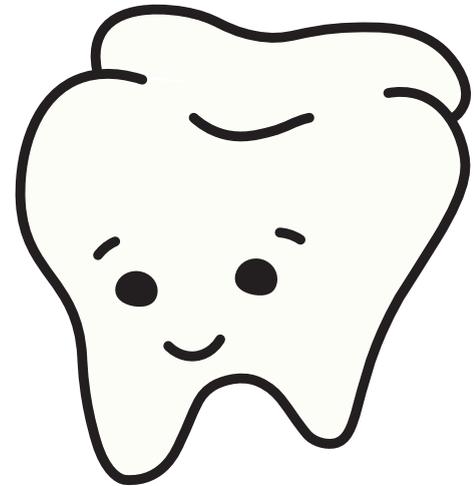
2



Sealants (plastic coatings) are brushed onto chewing surfaces of back teeth

Los selladores (revestimientos de plástico) se aplican a las superficies de masticación de los dientes traseros

3



Sealants protect teeth, prevent cavities and save money needed to fix decayed teeth

Los selladores protegen los dientes, previenen las caries y ahorran el dinero necesario para reparar dientes cariados

# Seal Away Tooth Decay

Dental sealants, along with fluoride, daily brushing, good nutrition and regular dental care, are important parts of total preventive care for children. Properly applied sealants can last for 5-10 years and have been proven to be effective in preventing decay. Placing sealants over sound (non-carious) occlusal surfaces, as well as incipient or carious occlusal lesions, can be safe and effective.

---

## PARENT ADVICE

---

- Dental sealants are protective coatings applied to children's most cavity-prone teeth. Shown to protect at-risk chewing surfaces and reduce caries risk in permanent teeth by up to 60%.
- **Who Benefits:** Children at risk of developing cavities. At risk by tooth-level factors (deep grooves, enamel formation, history of decay) or patient-level factors (dietary patterns, home care, decay history, inadequate quantity of saliva).
- **What Teeth Need Sealants:** Six-year molars (preferably within 6 months of eruption). Also may be placed on primary molars (if high risk is assessed); prevent cavities in baby molars that hold space for permanent teeth.



# Sticky is Not Safe

The texture or consistency of foods in children's diets can contribute to their caries risk. Foods that are soft, sticky, chewy and remain in the mouth, particularly in the pits and grooves of decay-prone molar teeth, should be limited or consumed when brushing after eating is possible.

---

## PARENT ADVICE

---

- Limit your child's snacking to routine in-between meal snacks.
- Have set times for snacking - avoid frequent snacking/grazing throughout the day.
- **Best Choices:** Raw fruit/vegetables, meat & cheese slices, plain or low sugar yogurt, unsweetened applesauce, unsweetened fruit or vegetable juices (at meal time).
- **What to Avoid:** Hard sticky candy that takes a long time to dissolve, "hidden" sugars (gummy vitamins, fruit roll-ups, dried fruit), sweetened cereals, cookies, potato chips or other crunchy chips that stick in grooves of teeth, chewing gum with sugar.
- If choosing the items above for your child's snacks, brush with fluoride toothpaste immediately after eating.

# Toothbrushing Tips

## Sugerencias para el cepillado dental



# Toothbrushing Tips

Effective toothbrushing requires parent supervision and assistance. Children lack the manual dexterity and patience to brush on their own until age 7-8. As a general rule, a child is old enough to brush on their own when he is able to tie his own shoes. Many babies may be resistant or fuss about toothbrushing at first, but keep trying.

---

## PARENT ADVICE

---

- Good oral hygiene habits start early. After each feeding, clean baby's teeth and gums with a clean, soft, damp cloth.
- As soon as the first tooth appears, use a small, soft-bristled toothbrush with fluoride toothpaste. Brush 2 times daily (after breakfast and before bed). After bedtime brushing, do not give anything else to eat or drink but water.
- Brushing can be done anywhere. Thorough toothbrushing takes time (2 minutes is ideal). Build up to 2 minutes over time.
- Make brushing a game! Read toothbrushing books to your child. Play music, turn on a favorite TV show or movie, watch toothbrushing videos online (<http://2min2x.org/>).
- **Positioning:** Cradle baby in your arms, lay them on a flat surface (changing table), place in car seat/baby seat, or use knee-to-knee technique with two people. (Face each other with knees touching, lay child on your laps. One adult gently holds hands and feet, the person at the child's head, cleans the teeth.)
- **Assisted Brushing:** Lift the child's lip, point bristles toward gumline and use short gentle back and forth strokes. Brush front, back and chewing surface of each tooth. Your hand gently guides the child's hand to reach all teeth.
- If your child is independent, let them brush on their own then brush each area once again to be sure all teeth are clean. Use dental floss in areas where the teeth touch.
- Make a toothbrushing chart. Reward children with a star or sticker for every day they brush 2 times for 2 minutes.
- Model good oral hygiene habits. Brush and floss with your child each day.

# How Much Toothpaste?

## ¿Cuánta pasta dental?



Children Under Age 2 : Niños menores de 2 años



Children Ages 2-5 : Niños de 2 a 5 años

Shown at actual size  
Aparece según el tamaño real

# How much Toothpaste?

About 25% of children experience tooth decay before they enter kindergarten. To protect your child's teeth, don't wait to start using toothpaste with fluoride. The American Dental Association advises that using a small amount of fluoride toothpaste can help prevent tooth decay while minimizing the risk of fluorosis – a change in the appearance of tooth enamel that results when young children consume too much fluoride, from any source, while the teeth are developing under the gums.

---

## PARENT ADVICE

---

- Choose the right amount of fluoride toothpaste to help your child avoid swallowing too much toothpaste.
- **Children under Age 2:** Use “grain of rice” size amount of fluoride toothpaste.
- **Ages 2-5:** Use a pea-sized amount of fluoride toothpaste.
- Try different flavors. Change flavors based on your child's preference.
- Do not rinse after brushing, allow toothpaste ingredients (fluoride) to remain of the teeth.
- Prescription-strength fluoride toothpaste may be recommended for children at high risk for ECC. Follow your provider's instructions. A smear applied daily to white spots may help remineralize the tooth and stop decay.

# Make Clean Teeth a Habit

Haga que los dientes **limpios** sean un hábito



# Make Clean Teeth a Habit

Teaching children good oral hygiene habits early is one of the most important health lessons a parent can teach their child. Daily toothbrushing and flossing, along with a healthy diet and regular dental visits, help children develop habits that support oral health for a lifetime.

---

## PARENT ADVICE

---

### TOOTHPASTE

- Clean your child's teeth with fluoride toothpaste daily as soon as the first tooth comes in.
- The amount of toothpaste depends on child's age. **Under age 2**, the toothpaste on the brush should be about the size of a grain of rice. **Ages 2-5**, use a pea-sized amount.

### DENTAL FLOSS

- Needed to remove plaque and debris from places that brushing misses.
- Requires adult assistance until child's manual dexterity develops (usually 8-10 years old).
- Floss all teeth that touch each other.
- Floss aids (floss holders or pre-threaded flossers) can help parents floss child's teeth or help teach child to floss on their own.

# Fluoride Fights Cavities

El fluoruro **protege** contra las caries



Your tap water at home may contain fluoride  
El agua corriente de su vivienda podría contener fluoruro



Fluoride protection is available also by  
prescription or over-the-counter

La protección con fluoruro también está disponible  
con receta o en productos de venta libre

# Fluoride Fights Cavities

Optimal amounts of fluoride can be found in many RI public water supplies. When possible, drinking fluoridated water from the faucet helps protect children's developing teeth. For families on well-water, fluoride supplements may provide protection. ALWAYS test well water supplies for fluoride content before prescribing supplements. Go to the RI Department of Health's website ([www.health.ri.gov/find/labs/privatewelltesting](http://www.health.ri.gov/find/labs/privatewelltesting)) to learn more about water testing.

Provide supplements in accordance with ADA guidelines:

| Dietary Fluoride Supplementation Schedule |  |            |         |
|---|--|------------|---------|
| Age                                       | Fluoride Content of Drinking Water (Parts Per Million-ppm) |            |         |
|   | < 0.3 ppm  | 0.3-0.6ppm | >0.6ppm |
| 0-6 mo                                    | None   | None       | None    |
| 6 mo – 3 y                                | 0.25 mg/d  | None       | None    |
| 3 – 6 y                                   | 0.50 mg/d  | 0.25 mg/d  | None    |
| 6 – 16 y                                  | 1.0 mg/d   | 0.50 mg/d  | None    |

*Approved by the American Academy of Pediatrics, American Dental Association, and American Academy of Pediatric Dentistry*

## PARENT ADVICE

- Drinking fluoridated water from your faucet is the easiest, least expensive, and most effective way to offer fluoride protection to your child.
- Well water has varying amounts of naturally occurring fluoride. If your drinking water comes from a well, have your water tested for fluoride content.
- Fluoride is available in some bottled waters. Check the label.
- Fluoride varnish, painted on the child's teeth, can stop the progress of tooth decay and prevent a small chalky white spot from becoming a full-blown cavity. Both dental and medical providers can perform this simple procedure to help prevent tooth decay.
- Prescription strength toothpaste (Prevident, Gel-kam, Clinipro 5000, etc.) may be recommended for children at high risk of ECC. Follow your provider's instructions. Applied once or twice a day at home, these toothpastes can help reverse the progress of decay.

# Oral Health Goals for Your Family

## Metas de la salud oral para su familia



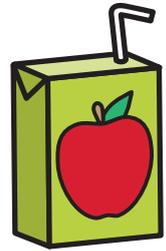
Set Up Next Fluoride Visit  
Programar la próxima visita



Eat Healthy Snacks  
Comer refrigerios saludables



No Soda  
No beber gaseosas



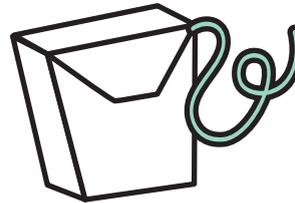
Juice with Meals Only  
Beber jugo solamente con las comidas



No Bottles for Sleeping  
No usar el biberón para dormir



Only Water in Sippy Cups  
Solamente beber agua en vasos con pico



Floss Everyday  
Usar el hilo dental todos los días



Brush 2X/Day with Fluoride Toothpaste  
Cepillarse dos veces por día



Drink Fluoridated Water  
Beber agua con fluoruro



Less or No Candy and Junk Food  
Comer pocos alimentos poco nutritivos



Use Dentist Prescribed Toothpaste  
Usar la pasta dental recetada



Chew Sugar-free Xylitol Gum  
Mascar goma sin azúcar

# Self-Management Goals

Parents should understand that dental caries is a chronic condition that cannot be cured. Like other chronic conditions (asthma, diabetes), dental caries requires ongoing daily management. There are things that families can do at home to minimize risk and improve oral health including controlling what and how often a child eats, practicing good oral hygiene daily, and using a protective medicine (fluoride).

A qualified dental or medical provider should conduct a child's oral health risk assessment by 6 months of age. A child is considered at high caries risk if:

- Mother/other caregiver or sibling has active caries
- Family has low socioeconomic status
- Has more than 3 between meal snacks or beverages with sugar
- Put to bed with bottle/sippy cup containing anything but water
- Has special healthcare needs
- Has white spots or enamel defects
- Has visible cavities or fillings

Following risk assessment and at each visit, parents of children at moderate to high risk should be asked to select two self-management goals to work on at home. At follow-up visits, ask parents if they are making progress towards these goals. Reaffirm or recommend new goals be set, as needed.

All staff should be knowledgeable and supportive of each child's goals and accomplishments. Encouragement to caregivers is essential to success in developing oral health for a lifetime.

# Dental Health During Pregnancy

La salud dental durante el embarazo



**X-rays: A key part of the exam**  
Radiografías: Una parte clave del examen



**Discussing dental treatment plan**  
Conversar sobre el plan de tratamiento dental



**Cleaning**  
Limpieza



**Treating**  
Tratamiento

# Dental Health During Pregnancy

Oral health is an important component of overall health during pregnancy and throughout a woman's lifespan. The American Congress of Obstetricians and Gynecologists (ACOG) recommends that health care providers assess a woman's oral health at the first prenatal visit and encourage pregnant women to see their dentist if it has been more than six months since their last dental visit or if they have any current oral health problems.

ACOG also recommends that providers reassure pregnant women that dental cleanings, diagnosis, and treatment including dental X-rays (with shielding of the abdomen and thyroid) and local anesthesia (lidocaine with or without epinephrine) are safe during pregnancy and that certain oral conditions (such as those requiring extractions and root canals) require immediate care.<sup>1</sup>

The following are examples of questions that may be used to assess a pregnant woman's oral health status.<sup>2</sup>

1. Do you have swollen or bleeding gums, a toothache (pain), problems eating or chewing food, or other problems in your mouth?
2. Since becoming pregnant, have you been vomiting? If so, how often?
3. Do you have questions or concerns about getting dental care while you are pregnant?
4. When was your last dental visit? Do you need help finding a dentist?

## Sources:

1. *The American College of Obstetrics and Gynecology (ACOG). Oral Health Care During Pregnancy and Through the Lifespan. (ACOG) Committee Opinion number 569, August 2013.*
2. *Oral Health Care During Pregnancy Expert Workgroup, 2012. Oral Health Care During Pregnancy: A National Consensus Statement. Washington, DC: National Maternal and Child Oral Health Resource Center.*

# Dental Tips for Pregnancy

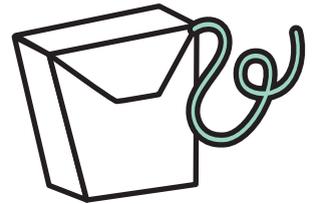
## Sugerencias dentales para el embarazo



**Visit your dentist regularly**  
Visite periódicamente a su dentista



**Brush 2-3X daily**  
Cepílese los dientes dos  
a tres veces por día



**Floss Daily**  
Use el hilo dental  
diariamente

**Rinse your mouth  
out after vomiting**  
Enjuáguese la boca  
después de vomitar



# Dental Tips for Pregnancy

---

## DENTAL TIPS FOR PREGNANCY

---

General health throughout the lifespan depends on good oral health. It may also reduce the transmission of potentially harmful oral bacteria from mothers to infants. To maintain a healthy mouth, pregnant women should:

- Visit their dentist every 6 months.
- Brush 2-3X everyday with fluoridated toothpaste.
- Floss daily.
- Eat a varied diet with fruits, vegetables, nuts, cheese, whole grains, lean meats, chicken, fish and eggs.
- Drink water and low-fat milk instead of sugary beverages.
- Rinse after vomiting. For patients with vomiting or reflux during late pregnancy, the use of antacids or rinsing with 1 teaspoon of baking soda dissolved in 1 cup of water may help neutralize the associated acid.

---

## COMMON ORAL HEALTH CONDITIONS DURING PREGNANCY

---

**Pregnancy gingivitis and/or benign gum lesions:** an increased inflammatory response to dental plaque and other irritants causes the gums to swell and bleed more easily. Evaluation by the dentist is typically needed.

**Tooth mobility:** ligaments and bone that support the teeth may temporarily loosen during pregnancy.

**Tooth erosion:** erosion of tooth enamel may be more common because of increased exposure to acids from vomiting or reflux.

**Dental caries:** increased acidity in the mouth, greater intake of sugary drinks and snacks secondary to pregnancy cravings, and decreased attention to prenatal oral health maintenance put pregnant women at risk for decay.

**Periodontitis:** plaque on teeth release bacterial toxins. The inflammatory response can cause bone loss, leading to pocketing and loose teeth.

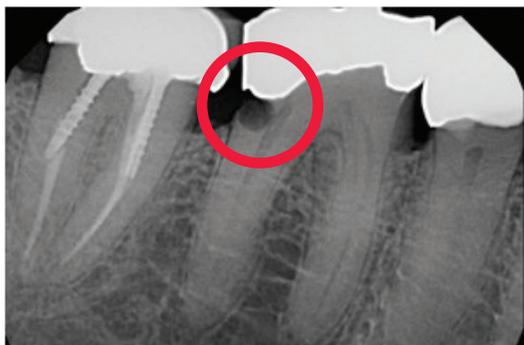
*Sources: American College of Obstetrics and Gynecology; National Maternal and Child Oral Health Resource Center*

# X-Rays are Important!

## Las radiografías son importantes



Healthy-looking tooth La muela parece sana



Root decay near nerve Carie en la raíz cerca del nervio

**Dental X-rays help find things the eye can't see**

Las radiografías dentales ayudan a encontrar cosas que no se pueden ver con los ojos



**Dental X-rays are safe with proper protection**

Las radiografías dentales son seguras si se usa la protección adecuada

# X-Rays are Important!

Dental radiographs, or X-rays, are a key component of a complete dental exam. They allow dental providers to see disease that may not be otherwise visible in the teeth and jawbone. Decay between the teeth (interproximal) or below the gum-line (root caries) is often undetectable by clinical exam and best found early so that treatment needs are minimal. Bone loss related to gum disease is found using both a periodontal probe and radiographs.

Dental radiographs are needed to assess tooth and jaw development, injuries, infection, and other abnormalities. How often x-rays are needed is determined by the individual's risk for disease and are typically not needed at every visit.

Radiation exposure from dental x-rays is surprisingly less than the amount of radiation exposure from other sources (see chart).

Dentists follow the ALARA principle, which stands for "As Low As Reasonably Achievable" when obtaining radiographs. This radiation safety principle limits your exposure by incorporating the following techniques:

- use of the fastest image receptor- most dentists now use digital which uses the least radiation;
- reduction in the size of the x-ray beam to the size of the image receptor whenever possible;
- use of proper exposure and processing techniques;
- use of leaded aprons and, whenever possible, thyroid collars.

Dental X-rays, with shielding of the abdomen and thyroid, are safe throughout pregnancy.

| Dental X-Ray                |  |
|-----------------------------|--|
| Ionizing Radiation Source   | Equivalent # of Low Dose Digital Dental X-rays |
| CT Scan                     | 12,200   |
| Mammogram                   | 5,500-11,000                                   |
| Annual Background Radiation | 4,000  |
| Chest X-Ray                 | 100-400  |
| Daily Exposure from Nature  | 10   |
| Traditional Dental X-Ray    | 10   |
| Airline Flight (per hour)   | 3-10 per hour of flight                        |
| Digital Dental X-Ray        | 1  |

Source: The American Dental Association, *Dental Radiographs, Benefits and Safety*.