DENTAL CARE FOR YOUNG CHILDREN

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What Will We Cover?

• Early childhood caries and infant oral health
• Tools for risk assessment in young children
• Motivational interviewing
• Disease management
The disease of early childhood caries (ECC) is the 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 of age, any sign of smooth-surface caries is indicative of severe early childhood caries (S-ECC).
What is infant oral health?

• The policy of the American Academy of Pediatric Dentistry is that the first dental visit should occur within 6 months of the eruption of the first primary tooth and no later than 12 months of age.
Why infant oral health?
Discomfort and Pain that Could Have Been Prevented.....
Simple Anomalies Like...

- Fused teeth
- Aphthous ulcer
- Low frenum attachment
- Eruption cyst
- Incisal chipped tooth
- Natal/Neonatal teeth
- Delayed eruption/teething
- Iron Supplement Stain
- Oral Thrush
- Trauma
- Oral Habits

These are easy for you to explain to the parent
ECC Epidemic - How early can we address the problem?

Teachable Moment
Oral Health Care During Pregnancy: A National Consensus Statement
Summary of an Expert Workgroup Meeting
Several states have guidelines for perinatal oral health care.

- California
- New York
- South Carolina
- Washington
## Provider agreement

<table>
<thead>
<tr>
<th>Procedure</th>
<th>% DDS</th>
<th>% OB</th>
<th>P-value</th>
</tr>
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<tr>
<td>X-Ray</td>
<td>69</td>
<td>92</td>
<td>&lt;0.001</td>
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<tr>
<td>Perio tx</td>
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<td>Amalgam</td>
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<td>&lt;0.001</td>
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<tr>
<td>Narcotics</td>
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<td>95</td>
<td>&lt;0.001</td>
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<tr>
<td>Antibiotics</td>
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<td>99</td>
<td>&lt;0.001</td>
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<tr>
<td>Nitrous</td>
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<td>34</td>
<td>&lt;0.001</td>
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<tr>
<td>Lidocaine</td>
<td>84</td>
<td>99</td>
<td>&lt;0.001</td>
</tr>
</tbody>
</table>
The age at the first preventive dental visit had a significant positive effect on dentally related expenditures.

1st dental visit / Total cost:

- Before age 1: $262
- Age 1-2: $339
- Age 2-3: $449
- Age 3-4: $492
- Age 4-5: $546
Consequences
What is Keeping You From Providing Preventive Care to Children Beginning at Age 1?
What happens during an infant oral health visit?

- Risk assessment
  - Parental interviews
    - Medical hx
    - Dental hx
    - Social hx
  - Oral examinations
- Preventive measures
- Anticipatory guidance
- Determination of a recall interval
Behavioral Risk Assessment

- Do you or another adult clean the child’s mouth/teeth once a day?  
  - Yes ___  No ___
- How many times a day is your child getting his/her teeth brushed?  
  - 1 x ___  2 x ___  3 x ___
- What time of day do you brush you child’s teeth?  
  - AM ___  PM ___
- Is your child cooperative when you brush his/her teeth?  
  - Yes ___  No ___
- Do you use toothpaste when you brush the child’s teeth?  
  - Yes ___  No ___
- Does your child use infant, kids, or adult toothpaste?  
  - Infant ___  Kids ___  Adult ___
- Has your child seen a dentist yet for a first checkup?  
  - Yes ___  No ___
- Do you have fluoride in your tap water? (live outside Franklin Co)  
  - Yes ___  No ___
- Do you give your child tap water or bottled water to drink?  
  - Tap ___  Bottled ___  Both ___
- Does your child take a prescription fluoride supplement?  
  - Yes ___  No ___
- Did you breast feed your child?  
  - Yes ___  No ___
- Are you still breast-feeding your child?  
  - Yes ___  No ___
- How many times/day do you breast-feed your child?  
  - 1-3 ___  4-6 ___  6-8 ___
- Does your child breastfeed during the night?  
  - Yes ___  No ___
- Is your child still taking a bottle?  
  - Yes ___  No ___
- What does your child drink in the bottle?  
  - Water ___  Milk ___  Juice ___  Pop ___  Kool-Aid ___  Other ___
- Is your child drinking out of a sippy cup?  
  - Yes ___  No ___
- What is your child drinking out of the sippy cup?  
  - Water ___  Milk ___  Juice ___  Pop ___  Kool-Aid ___  Other ___
- Is your baby put to bed/nap with a bottle or sippy cup?  
  - Yes ___  No ___
- Does your child drink out of a regular cup?  
  - Yes ___  No ___
- Is your baby eating sugary foods between meals?  
  - Yes ___  No ___
- How many times/day does your child snack?  
  - 1-2 ___  3-4 ___  4 or more ___
- Habits? Pacifier ___  Thumb-sucking ___  Finger-sucking ___  Other ________________________
You **Want** the Parent to Come Back With the Child…

- Use knee-to-knee
- Emphasize crying child is healthy child
- Use exam time to show and tell
- Parent must be there
- Need not be chairside
- End with a pat and smile
Toothbrush prophylaxis

- **Show the parent** how to brush the child’s teeth
- Amount of toothpaste:
  - ‘Smear’ – under 3 yrs
  - ‘Pea-sized’ – 3 to 6 yrs
Clinical Risk Assessment

Show the parent how to lift the lip on the top and push the lip down on the bottom to insure access to the gums.

Point out plaque along the gumline. Demo brushing the teeth, gums and tongue. Point out bleeding gums as result of plaque present.

Point out non-cavitated white spot lesions, deep pit and grooves in posterior teeth, or possible cavitation's

Apply fluoride varnish (after dentist checks the patient)

Decide if they are low, medium or high risk (clinical risk)
Table 2. Caries-risk Assessment Form for 0-5 Year Olds\textsuperscript{59,60}
(For Dental Providers)

<table>
<thead>
<tr>
<th>Factors</th>
<th>High Risk</th>
<th>Moderate Risk</th>
<th>Low Risk</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Biological</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mother/primary caregiver has active caries</td>
<td>Yes</td>
<td></td>
<td></td>
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<tr>
<td>Parent/caregiver has low socioeconomic status</td>
<td>Yes</td>
<td></td>
<td></td>
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<tr>
<td>Child has &gt;3 between meal sugar-containing snacks or beverages per day</td>
<td>Yes</td>
<td></td>
<td></td>
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<tr>
<td>Child is put to bed with a bottle containing natural or added sugar</td>
<td>Yes</td>
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<tr>
<td>Child has special health care needs</td>
<td>Yes</td>
<td></td>
<td></td>
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<tr>
<td>Child is a recent immigrant</td>
<td>Yes</td>
<td></td>
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<tr>
<td><strong>Protective</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Child receives optimally-fluoridated drinking water or fluoride supplements</td>
<td>Yes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Child has teeth brushed daily with fluoridated toothpaste</td>
<td>Yes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Child receives topical fluoride from health professional</td>
<td>Yes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Child has dental home/regular dental care</td>
<td>Yes</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Clinical Findings</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Child has &gt;1 decayed/missing/filled surfaces</td>
<td>Yes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Child has active white spot lesions or enamel defects</td>
<td>Yes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Child has elevated mutans streptococci levels</td>
<td>Yes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Child has plaque on teeth</td>
<td>Yes</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Circling those conditions that apply to a specific patient helps the practitioner and parent understand the factors that contribute to or protect from caries. Risk assessment categorization of low, moderate, or high is based on preponderance of factors for the individual. However, clinical judgment may justify the use of one factor (eg, frequent exposure to sugar-containing snacks or beverages, more than one dmfs) in determining overall risk.

Overall assessment of the child’s dental caries risk: High □  Moderate □  Low □
Table 3. Caries-risk Assessment Form for ≥6 Years Olds\textsuperscript{60-62}
(For Dental Providers)

<table>
<thead>
<tr>
<th>Factors</th>
<th>High Risk</th>
<th>Moderate Risk</th>
<th>Low Risk</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Biological</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Patient is of low socioeconomic status</td>
<td>Yes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Patient has &gt;3 between meal sugar-containing snacks or beverages per day</td>
<td>Yes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Patient has special health care needs</td>
<td></td>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td>Patient is a recent immigrant</td>
<td></td>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td><strong>Protective</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Patient receives optimally-fluoridated drinking water</td>
<td>Yes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Patient brushes teeth daily with fluoridated toothpaste</td>
<td>Yes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Patient receives topical fluoride from health professional</td>
<td>Yes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Additional home measures (eg, xylitol, MI paste, antimicrobial)</td>
<td>Yes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Patient has dental home/regular dental care</td>
<td>Yes</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Clinical Findings</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Patient has ≥1 interproximal lesions</td>
<td>Yes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Patient has active white spot lesions or enamel defects</td>
<td>Yes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Patient has low salivary flow</td>
<td>Yes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Patient has defective restorations</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Patient wearing an intraoral appliance</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Circling those conditions that apply to a specific patient helps the practitioner and patient/parent understand the factors that contribute to or protect from caries. Risk assessment categorization of low, moderate, or high is based on preponderance of factors for the individual. However, clinical judgment may justify the use of one factor (eg, ≥1 interproximal lesions, low salivary flow) in determining overall risk.

Overall assessment of the dental caries risk:  High ☐  Moderate ☐  Low ☐
Caries is a biofilm (plaque)-induced acid demineralization of enamel or dentin, mediated by saliva.
<table>
<thead>
<tr>
<th>Risk Category</th>
<th>Diagnostics</th>
<th>Interventions Fluoride</th>
<th>Diet</th>
<th>Restorative</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Low risk</strong></td>
<td>– Recall every six to 12 months</td>
<td>– Twice daily brushing</td>
<td>Counseling</td>
<td>– Surveillance&lt;sup&gt;z&lt;/sup&gt;</td>
</tr>
<tr>
<td><strong>Moderate risk</strong></td>
<td>– Recall every six months</td>
<td>– Twice daily brushing with fluoridated toothpaste&lt;sup&gt;β&lt;/sup&gt;</td>
<td></td>
<td></td>
</tr>
<tr>
<td>parent engaged</td>
<td>– Baseline MS&lt;sup&gt;α&lt;/sup&gt;</td>
<td>– Fluoride supplements&lt;sup&gt;δ&lt;/sup&gt;</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>– Professional topical treatment every six months</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Moderate risk</strong></td>
<td>– Recall every six months</td>
<td>– Twice daily brushing with fluoridated toothpaste&lt;sup&gt;β&lt;/sup&gt;</td>
<td></td>
<td></td>
</tr>
<tr>
<td>parent not engaged</td>
<td>– Baseline MS&lt;sup&gt;α&lt;/sup&gt;</td>
<td>– Fluoride supplements&lt;sup&gt;δ&lt;/sup&gt;</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>– Professional topical treatment every six months</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>High risk</strong></td>
<td>– Recall every three months</td>
<td>– Twice daily brushing with fluoridated toothpaste&lt;sup&gt;β&lt;/sup&gt;</td>
<td>Counseling</td>
<td></td>
</tr>
<tr>
<td>parent engaged</td>
<td>– Baseline and follow up MS&lt;sup&gt;α&lt;/sup&gt;</td>
<td>– Fluoride supplements&lt;sup&gt;δ&lt;/sup&gt;</td>
<td></td>
<td>– Active surveillance&lt;sup&gt;ε&lt;/sup&gt; of incipient lesions</td>
</tr>
<tr>
<td></td>
<td></td>
<td>– Professional topical treatment every three months</td>
<td></td>
<td>– Restore cavitated lesions with ITR&lt;sup&gt;ϕ&lt;/sup&gt; or definitive restorations</td>
</tr>
<tr>
<td><strong>High risk</strong></td>
<td>– Recall every three months</td>
<td>– Twice daily brushing with fluoridated toothpaste&lt;sup&gt;β&lt;/sup&gt;</td>
<td>Counseling, with limited expectations</td>
<td></td>
</tr>
<tr>
<td>parent not engaged</td>
<td>– Baseline and follow up MS&lt;sup&gt;α&lt;/sup&gt;</td>
<td>– Fluoride supplements&lt;sup&gt;δ&lt;/sup&gt;</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>– Professional topical treatment every three months</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<sup>α</sup> Baseline Data

<sup>β</sup> Fluoridated toothpaste

<sup>δ</sup> Fluoride supplements

<sup>ϕ</sup> ITR (intraoral appliance therapy)

<sup>ε</sup> Active surveillance

<sup>z</sup> Surveillance
<table>
<thead>
<tr>
<th>Risk Category</th>
<th>Diagnostics</th>
<th>Interventions</th>
<th>Diet</th>
<th>Sealants</th>
<th>Restorative</th>
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</thead>
<tbody>
<tr>
<td>Low risk</td>
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<td><img src="https://example.com/image4.png" alt="Image" /></td>
<td><img src="https://example.com/image5.png" alt="Image" /></td>
</tr>
<tr>
<td>Moderate risk parent engaged</td>
<td><img src="https://example.com/image6.png" alt="Image" /></td>
<td><img src="https://example.com/image7.png" alt="Image" /></td>
<td><img src="https://example.com/image8.png" alt="Image" /></td>
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<tr>
<td>Moderate risk parent not engaged</td>
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<td><img src="https://example.com/image15.png" alt="Image" /></td>
</tr>
<tr>
<td>High risk parent engaged</td>
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<td><img src="https://example.com/image18.png" alt="Image" /></td>
<td><img src="https://example.com/image19.png" alt="Image" /></td>
<td><img src="https://example.com/image20.png" alt="Image" /></td>
</tr>
<tr>
<td>High risk parent not engaged</td>
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<td><img src="https://example.com/image22.png" alt="Image" /></td>
<td><img src="https://example.com/image23.png" alt="Image" /></td>
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<td><img src="https://example.com/image25.png" alt="Image" /></td>
</tr>
</tbody>
</table>
# Guidelines for Prescribing Dental Radiographs

## Patient Age and Dental Developmental Stage

<table>
<thead>
<tr>
<th>Type of Encounter</th>
<th>Child with Primary Dentition (prior to eruption of first permanent tooth)</th>
<th>Child with Transitional Dentition (after eruption of first permanent tooth)</th>
<th>Adolescent with Permanent Dentition (prior to eruption of third molars)</th>
<th>Adult, Dentate or Partially Edentulous</th>
<th>Adult, Edentulous</th>
</tr>
</thead>
<tbody>
<tr>
<td>New patient* being evaluated for dental diseases and dental development</td>
<td>Individualized radiographic exam consisting of selected periapical/occlusal views and/or posterior bitewings if proximal surfaces cannot be visualized or probed. Patients without evidence of disease and with open proximal contacts may not require a radiographic exam at this time.</td>
<td>Individualized radiographic exam consisting of posterior bitewings with panoramic exam or posterior bitewings and selected periapical images.</td>
<td>Individualized radiographic exam consisting of posterior bitewings with panoramic exam or posterior bitewings and selected periapical images. A full mouth intraoral radiographic exam is preferred when the patient has clinical evidence of generalized dental disease or a history of extensive dental treatment.</td>
<td>Individualized radiographic exam, based on clinical signs and symptoms.</td>
<td></td>
</tr>
<tr>
<td>Recall patient* with clinical caries or at increased risk for caries**</td>
<td>Posterior bitewing exam at 6-12 month intervals if proximal surfaces cannot be examined visually or with a probe.</td>
<td>Posterior bitewing exam at 6-18 month intervals.</td>
<td>Not applicable</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Recall patient* with no clinical caries and not at increased risk for caries**</td>
<td>Posterior bitewing exam at 12-24 month intervals if proximal surfaces cannot be examined visually or with a probe.</td>
<td>Posterior bitewing exam at 18-36 month intervals.</td>
<td>Posterior bitewing exam at 24-36 month intervals.</td>
<td>Not applicable</td>
<td></td>
</tr>
<tr>
<td>Recall patient* with periodontal disease</td>
<td>Clinical judgment as to the need for and type of radiographic images for the evaluation of periodontal disease. Imaging may consist of, but is not limited to, selected bitewing and/or periapical images of areas where periodontal disease (other than nonspecific gingivitis) can be identified clinically.</td>
<td></td>
<td></td>
<td>Not applicable</td>
<td></td>
</tr>
<tr>
<td>Patient for monitoring of growth and development</td>
<td>Clinical judgment as to need for and type of radiographic images for evaluation and/or monitoring of dentofacial growth and development.</td>
<td>Clinical judgment as to need for and type of radiographic images for evaluation and/or monitoring of dentofacial growth and development. Panoramic or periapical exam to assess developing third molars.</td>
<td></td>
<td>Usually not indicated</td>
<td></td>
</tr>
</tbody>
</table>
Anticipatory guidance

- Anticipatory guidance is the provision of information to families about the oral health needs and developmental changes in their children between supervision visits.
Topics under oral development

- Developmental milestones
- First primary tooth
- Occlusion development
- Teething
- Tooth eruption
- Anatomic review
Infant Oral Health

- Spacing in the primary dentition bodes well for the permanent dentition while proximal contact does not and a crowded primary dentition is a sure sign of a crowded permanent dentition.
Topics under oral hygiene

- Provision of plaque removal
- Role of parent
- Positioning
- Role of dentifrice
- Devices
Topics under diet and nutrition

• Baby bottle use
• Frequency of sugar contacts
• Weaning
• Breastfeeding
• Role of plaque
• Safe snacking for health
Educational Posters

**SUGAR IN DRINKS**

- 1 cup (8 oz) = 11 grams of sugar
- 1 cup = 26 g
- 1 juice box of 8 oz serving = around 25 grams of sugar
- One 12 oz serving = around 25 grams of sugar
- 12 oz can = around 39 grams of sugar

<table>
<thead>
<tr>
<th>18 oz Fruit Smoothie</th>
<th>50 grams of sugar</th>
</tr>
</thead>
<tbody>
<tr>
<td>16 oz DQ Blizzard</td>
<td>56 grams of sugar</td>
</tr>
<tr>
<td>32 oz Malt</td>
<td>67 grams of sugar</td>
</tr>
<tr>
<td>28 oz Curry Steps</td>
<td>43 grams of sugar</td>
</tr>
</tbody>
</table>

**SUGAR IN SNACKS**

Sugar Content per Serving Size

- 15 grams of sugar in 1 serving
- 4 grams of sugar in 1 serving of brown sugar

1 Sugar Cube = 1 teaspoon of sugar = 4 - 5 grams of sugar
# Choose This, Not That

<table>
<thead>
<tr>
<th>Fruit</th>
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</thead>
<tbody>
<tr>
<td>Apple</td>
<td>✔</td>
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<tr>
<td>Mott's Applesauce</td>
<td>✔</td>
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<tr>
<td>Mott's Original</td>
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<tr>
<td>Welch's Fruit Snacks</td>
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<td>Banana</td>
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</tr>
<tr>
<td>Del Monte Sliced Peaches</td>
<td>✔</td>
<td></td>
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<td>Great Value Red Raspberries</td>
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<td>Sun-Maid Raisins</td>
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**Look For:**
- “No Sugar Added”, “Unsweetened”, “Light”

**Avoid:**
- “Sweetened” or “Syrup”
# Choose This, Not That

| Cereal          |  
|-----------------|---|
| Fiber One 80    | ✓ |
| Multi Grain     | ✓ |
| Apple Jacks     | ✗ |
| Peanut Butter   | ✗ |
| All Bran        | ✓ |
| Toasted Oat Bran| ✓ |
| Frosted Flakes  | ✗ |
| Cinnamon Toast  | ✗ |
| Whole Grain     | ✓ |
| Kashi GoLean    | ✓ |
| Total           | ✓ |
| Kraave          | ✗ |

**Look For:**
- ≤ 6 g sugar
- ≥ 3 g fiber
<table>
<thead>
<tr>
<th>Beverages</th>
<th>Choose This</th>
<th>Not That</th>
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<tbody>
<tr>
<td>Water</td>
<td>✔</td>
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<tr>
<td>Crystal Light</td>
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<tr>
<td>Coca-Cola Zero</td>
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<td>MIO</td>
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<tr>
<td>Dean's Milk</td>
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<td>Nesquik Chocolate</td>
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<td>✔</td>
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<td>SunnyD</td>
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<td>Powerade Zero</td>
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<td>Gatorade Chocolate</td>
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<tr>
<td>Monster Energy</td>
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<td>Capri Sun</td>
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<tr>
<td>Kool-Aid</td>
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</table>
Topics under habits

- Non-nutritive sucking
- Pacifiers
- Breastfeeding
- Identifying the effects of habits
American Academy of Pediatrics (AAP)/World Health Organization (WHO) Recommendations:

Exclusive breastfeeding for the first 6 months, continued through 1 year or longer “as mutually desired by mother and infant”.

- **Benefits to Infant**
  - Bonding
  - Immunologic
    - Overall immune system benefits from maternal antibodies
    - Decreased incidence of upper respiratory tract infection (URI) and lower respiratory tract infection (LRI), otitis media, gastrointestinal tract infections
  - Metabolic
    - Decreased risk of celiac disease, inflammatory bowel disease, obesity, diabetes
  - Other
    - Decreased risk of cardiovascular disease in adulthood
    - Linked to a decreased risk of SIDS
    - Positive effect on cognitive development
Manage risk/benefit of habits

- Understand the risk and benefit of non-nutritive sucking
- Recognize the deleterious effects of habits

To avoid long-term dental effects, counsel early and recommend cessation by 3 years of age or with establishment of the terminal planes of occlusion.
Is it ok for my child to suck his thumb (pacifier)?

- Thumb sucking, digit sucking, or pacifier use is considered normal in the first 2 years of life.

- Little likelihood of long-term damage if stopped by age 3 to 4 (80% stop by this time). Encourage stopping habit by 36 mo.

- Anterior open bite relationship and malocclusion with incisor flaring and other muscular habits often noted.

- Monitor habits before age 4. Intervene at 4-6 years old with positive reinforcement and reward system.
Pacifier Use

• Potential Benefits
  • Pacifier use is not associated with a decrease in duration of breastfeeding.
  • Pacifier use is protective for Sudden Infant Death Syndrome (SIDS), although the exact mechanism is not well understood.

• Potential Drawbacks
  • Prolonged pacifier can lead to dental malocclusion (anterior open bite, increased overjet, posterior cross-bite).
  • Prolonged use (past 6 months) may increase the incidence of otitis media.
  • Increased risk of oral candida and GI infections.
Pacifier Use

- AAP Guideline on Pacifier Use
  - Pacifiers can be used during breastfeeding, but delay introduction until breast-feeding is well established (approx. 1 month)

  - Cessation efforts should begin within the second six months of life to avoid otitis media
Recommended Pacifiers

• Molded pacifiers made of a solid piece of plastic preferred, since parts cannot come apart.

• Shield of pacifier should be at least 1.5 in across (3.8cm) so that infant cannot place entire pacifier in mouth and have ventilation holes.

• Pacifier safety: do not tie to neck, hand, or crib as this is a strangulation hazard.
Topics under injury prevention

- When learning to walk
- Toddlers and coffee tables
- Child abuse and neglect
- Car safety
- Child proofing
- Emergency instructions
- Oral pain
Dental Trauma Risk:

• Peak incidence of primary dentition trauma occurs between 2-3 year of age; consistent with gross motor development.

• The dental home provides a place for families to address dental injuries.

• Children with such injuries can be more prone to future dental trauma.
Recall interval determination

• Based on age and risk assessment
• Based on incipient and existent disease
• Based on tasks and preventive outcomes
• Doesn’t need to be 6 months
Motivational Interviewing

Motivational interviewing is a collaborative conversation to strengthen a person’s own motivation for and commitment to change.

Miller & Rollnick
Motivational Interviewing: Helping People Change, 3 ed, 2013
Prochaska & Di Clemente: *Transtheoretical Model of Behavior Change*
Goal of Motivational Interviewing

- Finding out which stage the parent is at, and addressing the concerns specific to their stage

- Have the patient articulate their “pros” and “cons” so they can better process and ultimately resolve the conflict between them.

- Empathizing and empowering the patient to take steps towards change by affirming their strengths as well as the centrality of their initiative in lasting change.
Ineffective
Spirit of Motivational Interviewing

Compassion

Acceptance

Partnership

Evocation


Effective
Open-Ended Questions

Asking open-ended questions is a proven way to build trust and rapport with your patients. It encourages greater patient involvement during treatment planning that leads to more positive treatment outcomes. Here is a list of sample open-ended questions to try out.

1. What would you like to focus on?
2. What’s important to you?
3. What would success look like to you?
4. Tell me how this has affected your life…
5. Where would you like to start making changes to habits?
6. What are your concerns with your child’s teeth today?
7. In regards to dental decay, what’s important to you?
8. Tell me more about that…
9. What do you want for your child’s dental health?
10. How can we help make things better?
11. Help me understand…
12. On a scale from 1 to 10, how are you feeling about the treatment plan we designed?
13. On a scale from 1 to 10, how motivated are you to begin making changes to some of the habits that are putting your child’s teeth at risk for cavities?
14. What potential obstacles do you foresee preventing you from accomplishing your goals?
15. What do you need in place to be successful with this plan?
16. What things have worked well for you in the past?
Planning for Change

Are there any goals you would like work on, in the next week or two, that will help to protect your child’s teeth from future cavities?

SELF MANAGEMENT GOALS for Caregivers

Patient Name: ___________________ DOV: ___________________

Your child has been assessed to have the following risk for caries (cavities):

- High
- Moderate
- Low

Please focus on the following GOALS between today and the next appointment:

- Brush teeth at least 3 times daily
- Use a small amount of fluoridated toothpaste and brush twice a day
- Use a soft toothbrush
- Floss teeth
- Rinse with mouthwash
- Do not use juice or milk with meals
- Plan a special “sweet treat” occasionally
- Avoid sugar
- Avoid sugary drinks
- Avoid cheese

CARIES CONTROL = +Bacteria & +Sugar/Starch & +Acid & +Fluoride

- Healthy snacks—Fruit, cheese, yogurt, meats, vegetables and non-sweetened whole grain crackers/cereal. Snacking between meals should be restricted to less than 1 times daily to control decay.
- Soda has no nutritional value and it is best to avoid soda completely. All sodas contain sugar and acid that attack teeth. Bacteria that cause cavities love soda since they help to dissolve the damage to teeth.
- Juice and milk contain sugar. Drink juice and milk at mealtimes only to reduce the acid level and damage to teeth. AAP & ADA recommends not more than 4-8 oz of 100 % juice from an age of 6 months of age till 2 years of age.
- Candy and most sweet treats contain a lot of sugar and other stick to teeth. Limit use to special occasions only and brush teeth immediately afterwards to reduce damage to teeth.
-Getting your child to give up their bottle may be difficult but it is important once your child has stopped using a bottle by age 18 months. Begin weaning at 1 year and replace a bottle with a cup to make the transition easier.
- Most children use a cup by 12-14 months.
- If your child prefers a sippy cup, remember to only serve water in it. Sippy cups with straws are better for teeth—regular sippy cups allow the juice or milk to bathe the teeth for longer periods of time.
- Fluoridated water helps prevent cavities—drink plenty of water for good health!
- Kiss your child’s teeth daily if you don’t use any spaces between teeth. Flossers with handles work well for young children.

For 1-2 years old, use a smear & for 2 to 6 year olds, use a pea sized amount of toothpaste and brush twice daily. Spit only and don’t drink water with sugar. The fluoride film of toothpaste has just enough fluoride to coat teeth and protect them from decay. Children need your help with brushing till age 7-8.

Remember to brush your teeth ASAPPL, 2x daily and visit your dentist regularly. These self-management goals are recommended for the whole family!
When You Can’t Fix ‘Em: Preventive Measures

- What to do about white spot lesions?
  - 3 month recall
  - Parental education
  - Fluoride varnish

- Difficult to prevent cavitation in high risk children
Xylitol
Results from the Xylitol for Adult Caries Trial (X-ACT)

James D. Bader, DDS, MPH; William M. Vollmer, PhD; Daniel A. Shugars, DDS, PhD, MPH; Gregg H. Gilbert, DDS, MBA; Bennett T. Amaechi, BDS, MS, PhD; John P. Brown, BDS, MS, PhD; Reesa L. Laws, BS; Kimberly A. Funkhouser, BS; Sonia K. Makhija, DDS, MPH; André V. Ritter, DDS, MS; Michael C. Leo, PhD; for the X-ACT Collaborative Research Group

Many adults continue to develop dental caries throughout their life spans, and caries activity in this population is at least as extensive as it is in children and adolescents.1 However, dental caries prevention efforts historically have focused on children rather than adults. Public oral health programs targeting caries prevention for adults are uncommon, and provision of caries-preventive treatment to adult dental patients at an elevated risk of developing caries is relatively infrequent.2,3 One possible reason for this lack of attention may be that knowledge of the effectiveness of caries-prevention methods for adults is incomplete. The 2001 National Institutes of Health (NIH) Consensus Development Conference Statement on the Diagnosis and Management of Dental Caries Throughout Life expressed concern regarding the paucity of studies in adults, noting that “[a]lmost all of the relevant studies included populations of children between 6 and 15 years of age.”

ABSTRACT

Background. Although caries is prevalent in adults, investigators have tested few preventive therapies in adult populations. In a randomized controlled trial, the authors evaluated the effectiveness of xylitol lozenges in preventing caries in adults at elevated risk of developing caries.

Methods. The Xylitol for Adult Caries Trial (X-ACT) was a three-site placebo-controlled randomized trial. Participants (n = 691) aged 21 through 80 years consumed five 1.0-gram xylitol or placebo lozenges daily for 33 months. They underwent clinical examinations at baseline and at 12, 24 and 33 months.

Results. Xylitol lozenges reduced the caries increment 10 percent. This reduction, which represented less than one-third of a surface per year, was not statistically significant. There was no indication of a dose-response effect.

Conclusions. Daily use of xylitol lozenges did not result in a statistically or clinically significant reduction in 33-month caries increment among adults at an elevated risk of developing caries.

Clinical Implications. These results suggest that xylitol used as a supplement in adults does not reduce their caries experience significantly.

Key Words. Xylitol; dental caries prevention; randomized controlled trial; adults.

Silver Diamine Fluoride (SDF)

\[ \text{Ag}^+ \quad (\text{NH}_3^+)_2 \quad \text{F}^- \]
SDF

- First approved for use in Japan over 80 years ago
- Arrests active decay and prevents decay in other teeth
- Arrested caries are stained black
- Used for years for caries control in third world countries
Domestic Use

- Cleared by FDA in 2014 for hypersensitivity
- Available to public August 2015 (Advantage Arrest)
- New CDT code for caries arrest approved for 2016

**Advantage Arrest**

- 38% SDF, purified water
- Manufactured by Elevate Oral Care
- Approximately $100 per 5mL bottle
- 200 drops = 50¢ / drop
- Three year shelf life. Do not refrigerate. Avoid freezing or heat
SDF Adverse Effects

• Staining
  • Skin or gingiva for up to 14 days
  • Permanent on clothes and clinic surfaces

• Minimal gingival responses
  • Up to 9% redness after one day
  • No erythema, bleeding, white changes, ulceration or pigmentation after 24 hours
  • Coat gingiva with petroleum jelly

• Health Department of Western Australia
  • No evidence of fluorosis from long-term use
SDF Considerations

SDF Contraindications
  • Silver allergy

SDF Relative Contraindications
  • Significant desquamative gingivitis or mucositis
    • Increased absorption and pain expected
    • Heightened caution and use of protective gingival coating may suffice
  • Max Dose: 25 µL (1 drop) / 10kg per treatment visit (5 teeth)
  • Commensurate with EPA’s allowable short-term exposure of 1.142 mg silver per liter of drinking water for one to ten days
## Indications For Use

<table>
<thead>
<tr>
<th>Extreme caries risk (xerostomia or severe ECC)</th>
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<tr>
<td>Treatment challenged by behavior or medical management</td>
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<tr>
<td>Large number of lesions that may not be all treated in one visit</td>
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<tr>
<td>Difficult to treat carious lesions</td>
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<td>Patients without access to care</td>
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</table>
**Application**

1. **Isolation**
2. One drop SDF in dappen dish
3. Apply Vaseline to surrounding gingiva
4. Dry tooth gently
5. Apply SDF with micro-brush
6. Allow SDF to absorb for up to one minute
   - Commonly effective with only seconds of exposure
7. Remove excess with cotton roll or gauze to prevent taste or excess ingestion
8. Rinse with water
9. Restore with GI or composite if indicated
10. Thin coat of 5% NaF varnish
Coding

• New code, D1354, approved for “Interim caries arresting medication application”
• Approved by the Code on Dental Procedures and Nomenclature (CDT) for 2016
• Code definition:
  • “Conservative treatment of an active, nonsymptomatic carious lesion by topical application of a caries arresting or inhibiting medication and without mechanical removal of sound tooth structure.”
  • Insurers are in process of evaluating coverage for this treatment
Treatment Planning Challenges - Obvious Caries

Restorative Options

- ITR
- Strip crowns
- SSC
- Open face SSC
- Kinder crown
- Extraction

Behavior management

- Hold and Go
- Sedation
- General Anesthesia
ITR: Indications in Pediatric Dentistry

- Pre-cooperative children under three years of age
- Sedation or GA not options
- Parental desire
- Well-circumscribed lesions into dentin with no pulpal symptoms
- Follow-up likely, usually 3-6 months
Thanks for Your Attention