

Caries Risk Assessment, Fluoride Varnish & Counselling

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Carries risk assessment:

1. Fosters the treatment of the disease process instead of treating the outcome of the disease.
2. Allows an understanding of the disease factors for a specific patient and aids in individualizing preventive discussions

Carries Risk Assessment

- Involves a combination of factors including:
 - Diet
 - Fluoride exposure
 - A susceptible host
 - Microflora
- These factors interplay with a variety of social, cultural, and behavioral factors

Carries Risk Assessment Tools

- Many different CRA tools – ADA; AAPD
- I find the easiest to use is from the Texas HHS
- Rate 9 factors as low, medium or high risk

| |
|-------------------------------|
| Patient Name _____ |
| Age _____ Date of Visit _____ |
| Dentist Signature _____ |

Caries Risk Assessment Tool - Ages 6 through 35 months

| FACTOR | LOW | MODERATE | HIGH |
|---|--------------------|-------------------|--|
| Caries Activity | None | Within 24 months | Within 12 months |
| Demineralized Areas | No white spots | 1 white spot | > 1 white spot |
| Parent(s)/Primary Caregiver(s) | No decay | Low caries rate | High caries rate |
| Family History – Sibling(s) | No caries activity | Low caries rate | High caries rate |
| Presence of plaque, gingivitis | None | Moderate | Visible plaque on anterior teeth |
| Fluoride Exposure | Optimal | Low to optimal | Low |
| Sugar Consumption (Including bottle or sippy cup use) | With meals only | 1-2 between meals | > 3 between meals |
| Dental Home | Established | Irregular use | None |
| Special Conditions | None | None | Enamel hypoplasia Special needs patient Impaired salivary flow |
| Overall assessment of the dental caries risk: <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> High | | | |

Fluoride Varnish

- Prevents and controls dental caries by increasing the amount of fluoride on the tooth's surface
- When in contact with saliva it hardens on the tooth and keeps the fluoride in contact with the enamel for a longer period of time than other topical fluorides, such as gels or foams.
- This exposure can last up to a week

Fluoride Varnish

- **1. Inhibits demineralization – makes hard tissues more resistant to acid**
- **2. Promotes remineralization – Fluoride ions combine with enamel and dentin carbonated apatite to create a more acid-tolerant form of fluorapatite-like material**
- **Inhibits plaque bacteria – fluoride can also inhibit bacterial intracellular enzymes**

Fluoride Varnish

- Recommended dose for children under 6 years is 0.25 ml of 5% sodium fluoride (2.26% fluoride)
- For high-risk children fluoride varnish can be applied every 3 months
- For high-risk children fluoride varnish should be applied when the first tooth erupts (around 6 months)



- Apply to children at-risk of tooth decay, beginning with the first tooth.
- Apply 2-4 times/year for maximum benefit. Many providers apply varnish on the same schedule as childhood immunizations.

Supplies needed:

- Cotton gauze (2x2)
- Fluoride varnish and applicator
- Latex/vinyl gloves

Step 1: Position the child—knee-to-knee

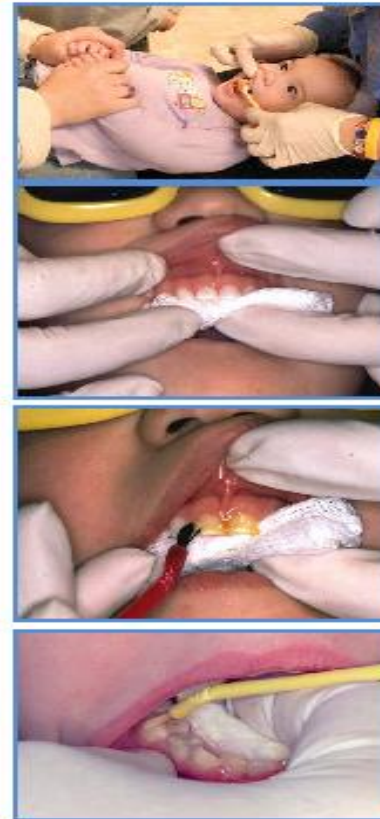
- For an infant or toddler, place the child on the parent's lap with the head on their knees and the legs around the waist. Position yourself knee-to-knee with the parent and treat the child from above the head.
- Or, place the young child on an exam table and work from above the head.

Step 2: Apply the fluoride varnish

- Open the child's mouth.
- Dry the teeth with gauze.
- Apply a thin layer of the fluoride varnish to all surfaces of the teeth.
- Once it is applied, the fluoride varnish sets quickly with contact of the saliva.
- Repeat the fluoride varnish application every 3 – 6 months as necessary.

Step 3: Follow-up info for parent

- Teeth may be yellow from the varnish.
- Child should eat a soft, non-abrasive diet for the rest of the day.
- Do not brush or floss until the next morning.
- Give the parent the information sheet "Fluoride Varnish."



Counselling Caregivers of High-Risk Children

- Be educational, not confrontational
- Most caregivers have no idea why their children have caries
- Explain to the primary caregiver that their oral health is a primary concern for the risk of their child developing a cariogenic biofilm

Transmission of Cariogenic Biofilm

- Babies are not born with streptococcus mutans
- They acquire it from the mother or primary caregiver
- The window of infectivity is between 19-31 months with a mean of 26 months
- The longer the transmission is delayed the less caries

Transmission of Cariogenic Biofilm

- Sharing feeding utensils
- Caregiver wets their finger with their saliva to wipe their child's mouth
- Kissing the child's mouth or their fingers
- Sharing a toothbrush
- Blowing on food to reduce temperature
- Child drops their pacifier, and the caregiver picks it up and licks it before placing back in the child's mouth

Counselling Discussions

- Teach your caregivers how to read labels to look for sugar content in a serving size
- Sugar content on labels is in grams
- 4 grams = 1 teaspoon
- Try to keep grams in single digits – less than 10

16 servings per container

Serving size 1 Tbsp. (21g)

Amount per serving

Calories 60

% Daily Value*

Total Fat 0g **0%**

Saturated Fat 0g **0%**

Trans Fat 0g

Cholesterol 0mg **0%**

Sodium 0mg **0%**

Total Carbohydrate 17g **6%**

Dietary Fiber 0g **0%**

Total Sugars 17g

34%[†]

Protein 0g

Vitamin D 0mcg 0%

Calcium 0mg 0%

Iron 0mg 0%

Potassium 0mg 0%

* The % Daily Value (DV) tells you how much a nutrient in a serving of food contributes to a daily diet. 2,000 calories

1

This shows the %DV for added sugars in single-ingredient sugars and syrups.

Single-ingredient sugar and syrup products may also

Daily Sugar Intake

- American Heart Association recommends no more than 6 teaspoons (25 grams) a day for women and 9 teaspoons (37 grams) a day for men
- Eating too much added sugar each day can increase your risk of diabetes, insulin resistance, dental; issues, heart disease and high blood pressure
- 12 oz can of cola contains 39 grams of sugar (almost 10 tsps.)

Mouth Ph levels

- Ph of 7 is neutral
- Ph of below 5.5 - enamel starts to dissolve
- Diet sodas have no sugar but have high acidity
- Diet Pepsi – Ph of 3.031
- Diet Dr. Pepper – Ph of 3.169
- Sports drinks – Powerade Zero – Ph of 2.93

Lowest Sugar Cereals per Serving

- Original Cheerios – 2 grams
- Rice Chex – 3 grams
- Kix – 4 grams

Highest Sugar Cereals per Serving

- Post Golden Crisp – 21 grams
- Raisin Bran Crunch – 19 grams
- Post Honey O's – 18 grams
- Marshmallow Fruity Pebbles – 18 grams
- Honey Smacks – 18 grams
- Capt. Crunch – 16 grams

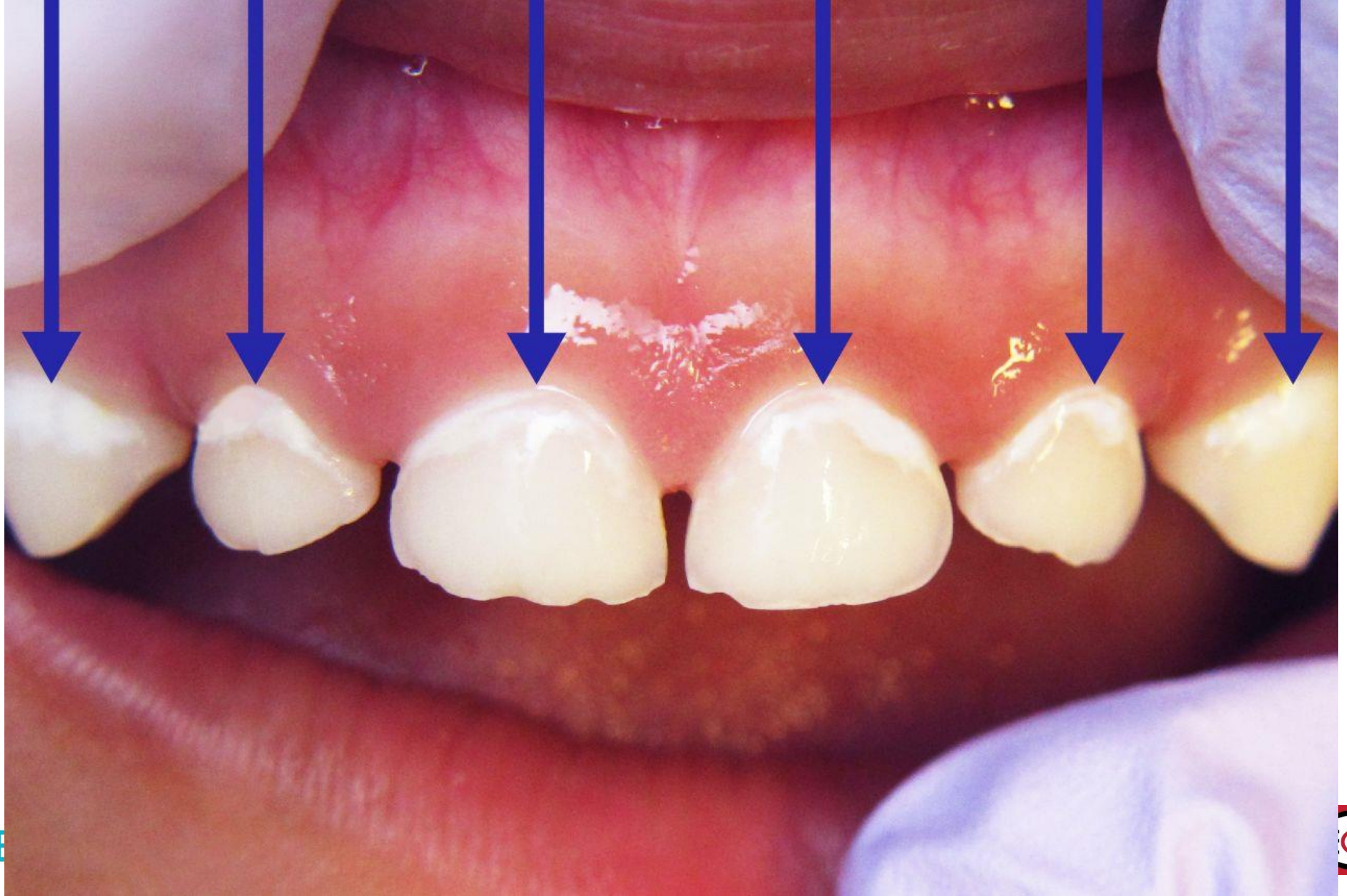
Xylitol Chewing Gum

- Daily Xylitol chewing gum use by the primary caregiver is a good way to reduce the transmission of harmful streptococcus mutans to the child
- When *S. mutans* takes xylitol into the cell it metabolizes it into xylitol-5-phosphate, which is toxic to the bacteria.
- They can no longer metabolize sugar to form lactic acid
- Now any *S. mutans* transferred to the child can't cause caries

Counselling Discussions

- Teach the caregiver the “Lift the Lip” Technique
- Once a month lift the child’s upper lip and check the front teeth for white spot lesions
- Clean baby’s mouth after every feeding with wet washcloth or finger cloth to remove residue
- Gets the baby used to having mouth cleaned and baby will accept toothbrush more willingly as teeth erupt





Counselling Discussions

- At 6 months start diluting bottle contents - milk, juices, etc with water to reduce the sugar content
- Switch the baby from a bottle to Sippy cup by age 1 and also dilute milk and juice with water to reduce sugar content
- At will breast nursing does increase the risk of decay. Especially important if the baby sleeps with the mother and can nurse on demand

Counselling Discussions

- **Oral (syrup) medications contain high levels of sugar that produce acid**
- **Follow oral medications with water or after a few minutes provide mouth cleaning**

Fluoride Supplements – AAP, AAPD

| <u>Fluoride level</u> | <u>Age</u> | <u>Daily Fluoride dosage</u> |
|-----------------------|------------------------|------------------------------|
| • 0-.3 ppm | Birth – 3 years | .25 mg starting at 6 months |
| | • 3 – 6 years | .5 mg |
| | • 6 – 18 years | 1 mg |
| <hr/> | | |
| • .3-.6 ppm | Birth – 3 years | None |
| | • 3 – 6 years | .25 mg |
| | • 6 – 18 years | .5 mg |
| <hr/> | | |
| .6 – 1 ppm | No fluoride supplement | |