3M ESPE Conflict of Interest Disclosure

"As an employee of 3M ESPE,

I have a financial interest in 3M ESPE

Dental medications, materials or

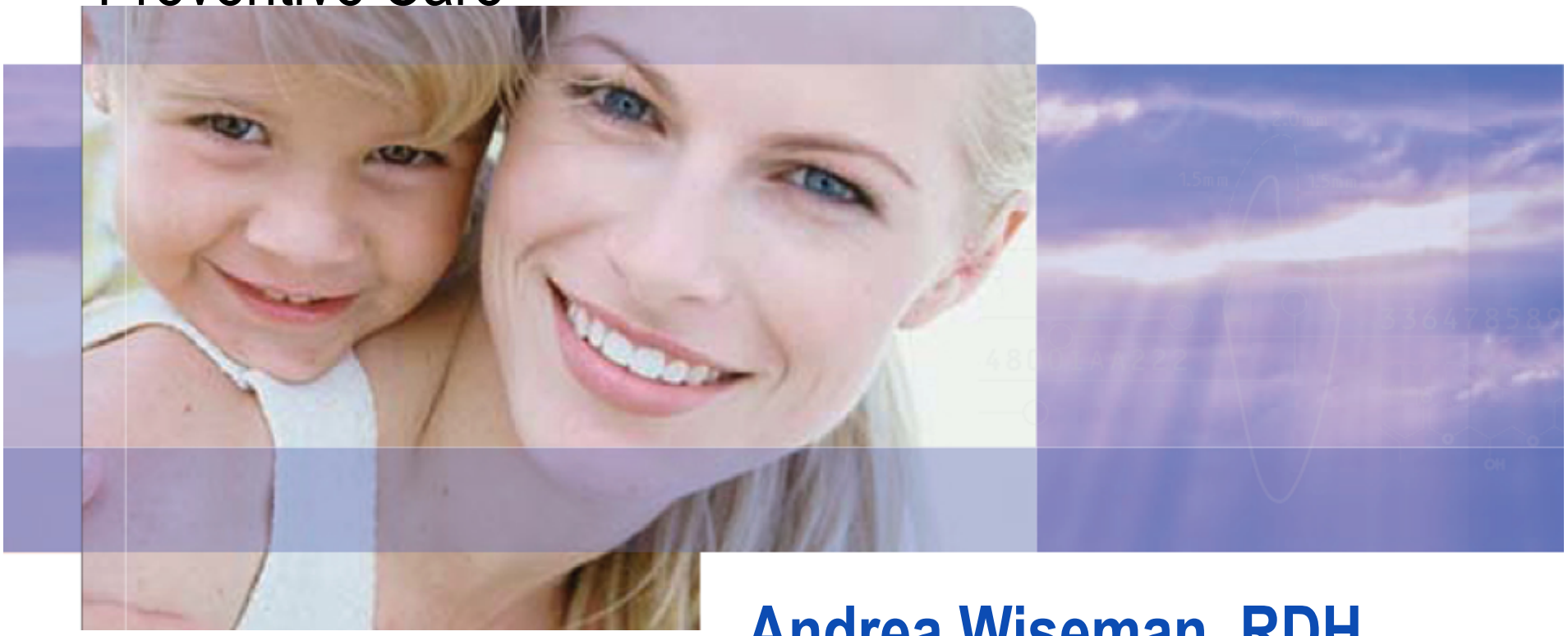
equipment discussed during this program"

Power of Prevention

Andrea Wiseman, RDH
3M ESPE Preventive Care

Power of Prevention

Preventive Care



Andrea Wiseman, RDH
3M ESPE Preventive Care

Texas Blue Bonnets

Goals:

- **Understanding CAMBRA**
- **Identify via risk assessment for Caries:**
  - *Low Risk, Moderate Risk, High Risk*
  - *Risk Assessment Chart*
- **Review Medication that are dispense from office:**
  - *Understanding Parts per Million (ppm)*
  - *Hydroxapatite - Fluoroapatite*
  - *Varnish, Sodium, Stannous, CHX*
  - *Calcium Phosphate technologies*
- **Protocols, Dialog, and Insurance Codes**
  - *How to implement medications into a caries risk management*
  - *program*
  - ***Best Chance for Success***
  - *Educate*
  - *Motivate*
  - *Medicate*

Oral Health Care Providers

are responsible for identifying Risk Factors inside the oral cavity before disease occurs.

CaMBRA

Caries Management by Risk Assessment

Identifying Risk Prior to Cavitations

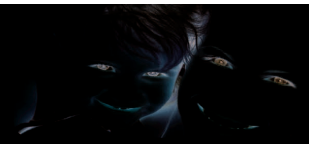
Caries Management by Risk Assessment

CAMBRA

Risk Factors That May Increase Caries Risk

Including, but not limited to (Source: ADA www.ada.org):

- Fair to Poor oral hygiene
- Poor family dental health
- Irregular dental care
- Many multi-surface restorations
- Chemotherapy, radiation therapy
- Drug or alcohol abuse
- High titers of cariogenic bacteria
- Cariogenic diet
- Active orthodontic treatment
- Developmental or acquired enamel defects
- Presence of exposed root surfaces
- Restorations overhangs, open margins
- Physical or mental disability with inability to perform proper oral health care
- Genetic abnormality of teeth
- Xerostomia



Caries Risk Assessment Form

This space is for an office to customize header

Patient Name: _____ **Date:** _____

Please indicate the number of cavities the patient has had in the past three years: ☐ None ☐ 1–2 ☐ 3+

Factors increasing risk for future cavities may include, but are not limited to:

- ☐ Poor family dental health
- ☐ Cariogenic diet (high sugar or acidic food/beverage)
- ☐ Xerostomia (dry mouth)
- ☐ Chemo/radiation therapy
- ☐ Active orthodontic treatment
- ☐ Inconsistent professional dental care
- ☐ Presence of exposed root surfaces
- ☐ Poor oral hygiene
- ☐ Many multi-surface restorations
- ☐ Developmental or acquired enamel defects (spots, marbled, cracked,worn)
- ☐ Drugs/alcohol/tobacco usage
- ☐ Eating disorders
- ☐ Misalignment
- ☐ Restoration overhangs, open margins, clasps or brackets
- ☐ Prolonged nursing (bottle or breast)
- ☐ Sleep/snore guard, C-PAP
- ☐ Medications/Medical conditions: _____
- ☐ Other: _____

Patient Age: ☐ < 6 years of age ☐ ≥ 6 years of age

No Risk Factors	☐	☐	☐ ≥6	☐ **Low Risk**
1 or more Moderate Risk Factors	☐	☐	☐	☐ **Moderate Risk**
1 or more High Risk Factors	☐	☐	☐	☐ **High Risk**

Proposed treatment for improved prognosis:

_____

_____

American Dental Association recommends the use of in-office fluoride varnish or fluoride foam/gel, 5000 ppm F dentifrice, and antimicrobial rinses (home treatment) for patients identified as moderate or high risk.[2,3]

3M ESPE
Dental Products
3M Center
Building 275-2SE-03
St. Paul, MN 55144-1000
U.S.A.
1-800-634-2249
www.3MESPE.com

[1] **This form is adapted from the California Dental Association and American Dental Association publications.** Risk Factors derived from ADA Professional Recommendations (published 5/2006).

[2] Varnish application at 3- or 6-month intervals, OR Fluoride gel application at 6-month intervals. "Professionally Applied Topical Fluoride," Executive Summary of Evidence-Based Clinical Recommendations. The ADA Council on Scientific Affairs, JADA, May 2006.

[3] The ADA endorses a 4 minute foam/gel treatment.

Moderate Risk

6 + Years Old

- In office fluoride varnish with calcium and phosphate
- Therapeutic Xylitol chewing gum or mints (2 grams 3 x's daily
- Avoid alcohol based mouth rinses
- Low abrasive OTC or Medicated fluoride toothpaste
- Re-Evaluate in 3 to 4 months

Immediate benefits:

- ***Control***
- ***Caries risk reduction***
- ***Enhance profit (average fee $25)***

High Risk Protocols

6 + years old

- In office fluoride varnish with calcium and phosphate
- Therapeutic Xylitol chewing gum or mints (High risk 2 grams 5 x's daily
- Avoid alcohol based mouth rinses
- Medicated prescription strength toothpaste with calcium phosphate
- Home Care Review
- Re-Evaluate in 3 months

Immediate Benefits:

- ***Caries risk reduction, arresting and reversing early caries.***
- ***Increases patient and staff compliance***
- ***No trips to the store***
- ***Decreases product interactions***
- ***Enhanced production (Average fee $45 for both)***

5 days a week/ 48 weeks a year

Production increases decay decreases

Production Before CaMBRA

$240,000

Production After CaMBRA

$340,560

5 days a week/ 48 weeks a year

Production increases decay decreases

Before Implementing CaMBRA

8 Hygiene Patients / day@$125 each = $1000 / day

=$5000 / week
=$240,000 / year

After Implementing CaMBRA

8 Hygiene Patients / day

1 - Low to Moderate Risk

6 – High Risk

1 – Extremely High Risk

Total Production = $1419 / day

=$7095 / week

=$340,560 / year

De-Mineralization

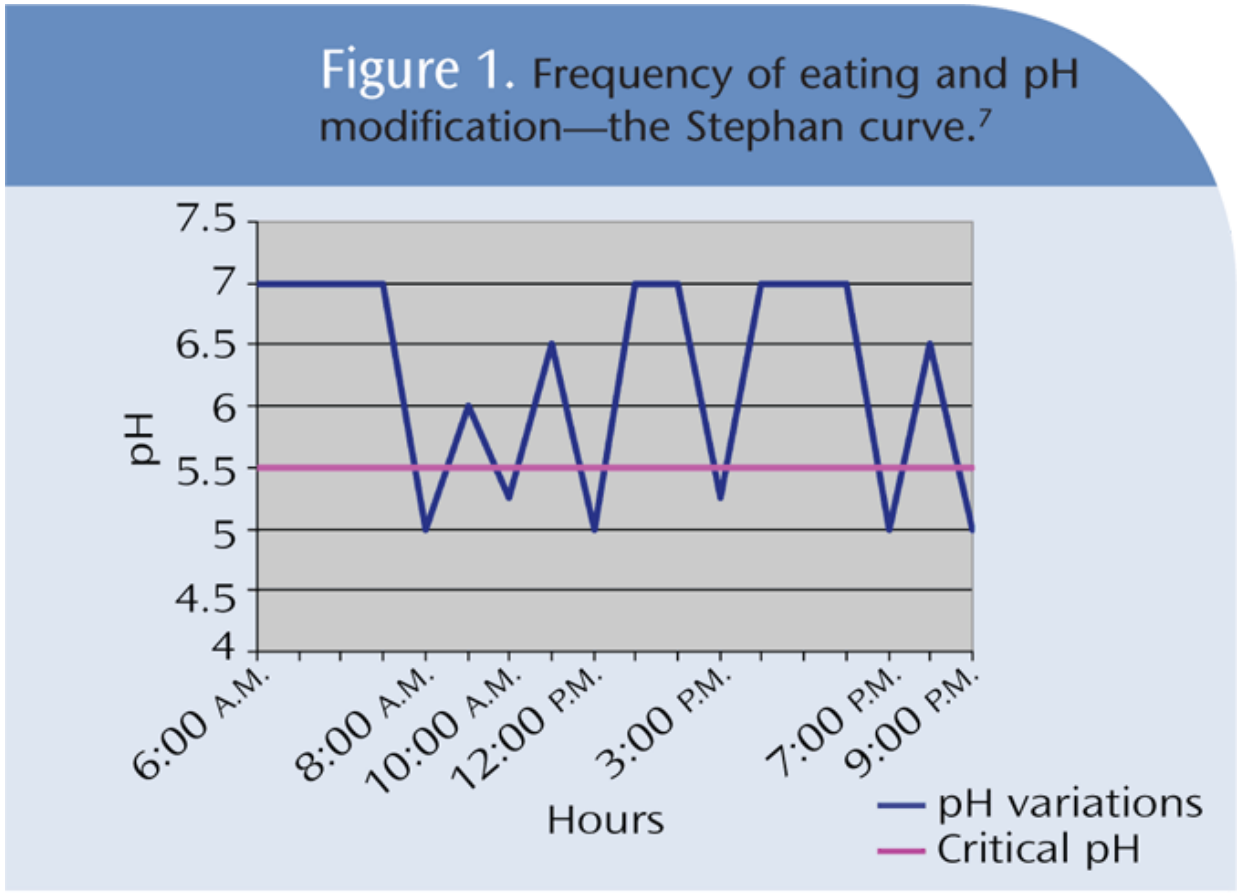
And

Re-Mineralization

Dental caries result when the rate of demineralization exceeds the rate of remineralization and the lattice work is destroyed.

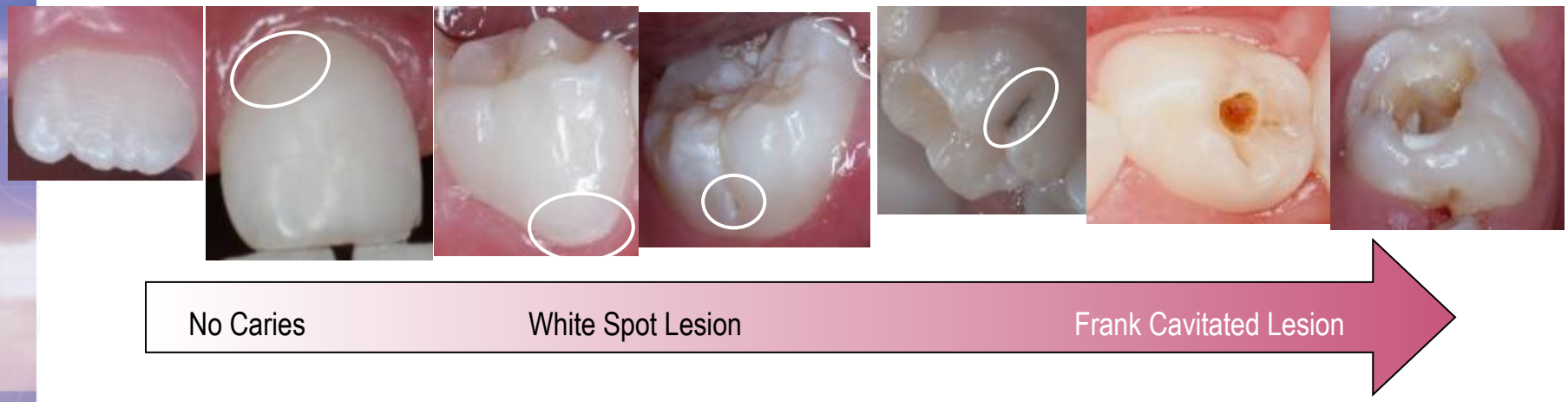
Fluoride, Calcium and Phosphate aid in strengthening the weak lattice work to prevent cavitations.

PH Balance in the Oral Cavity of an Average Patient



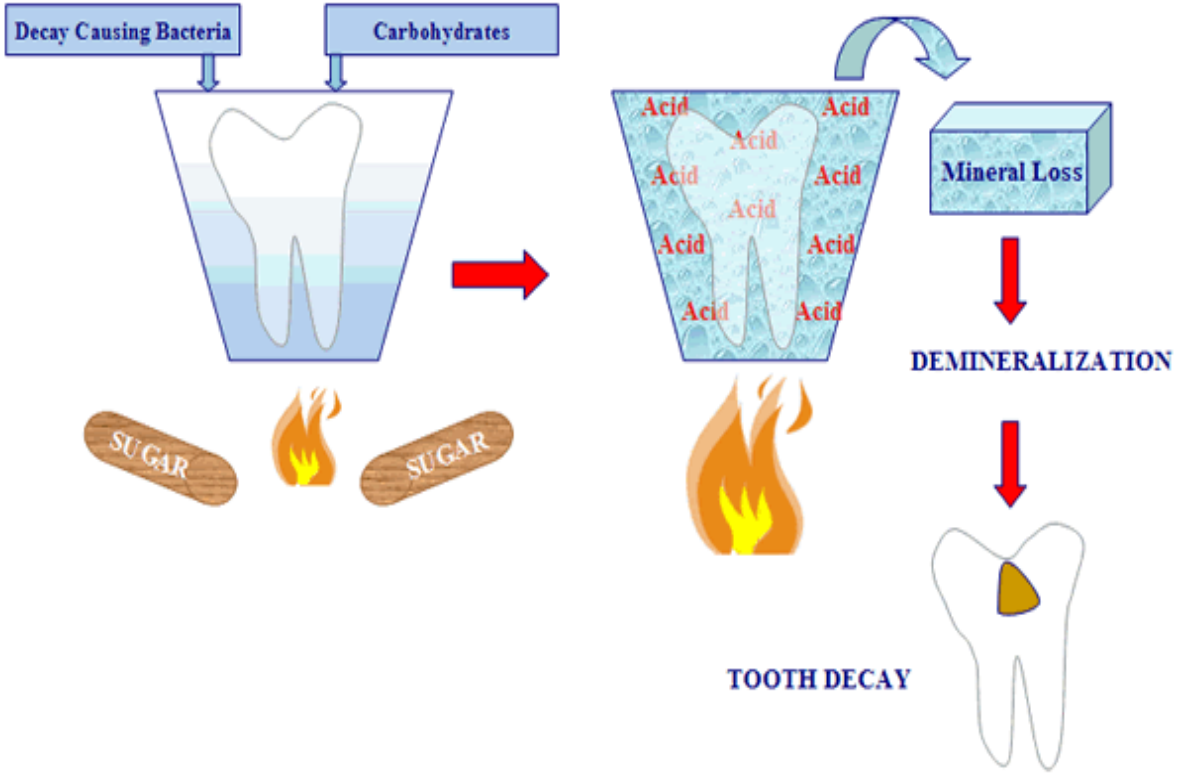
Dimensions of Dental Hygiene, September 2009

Dental Caries – Progressive Disease

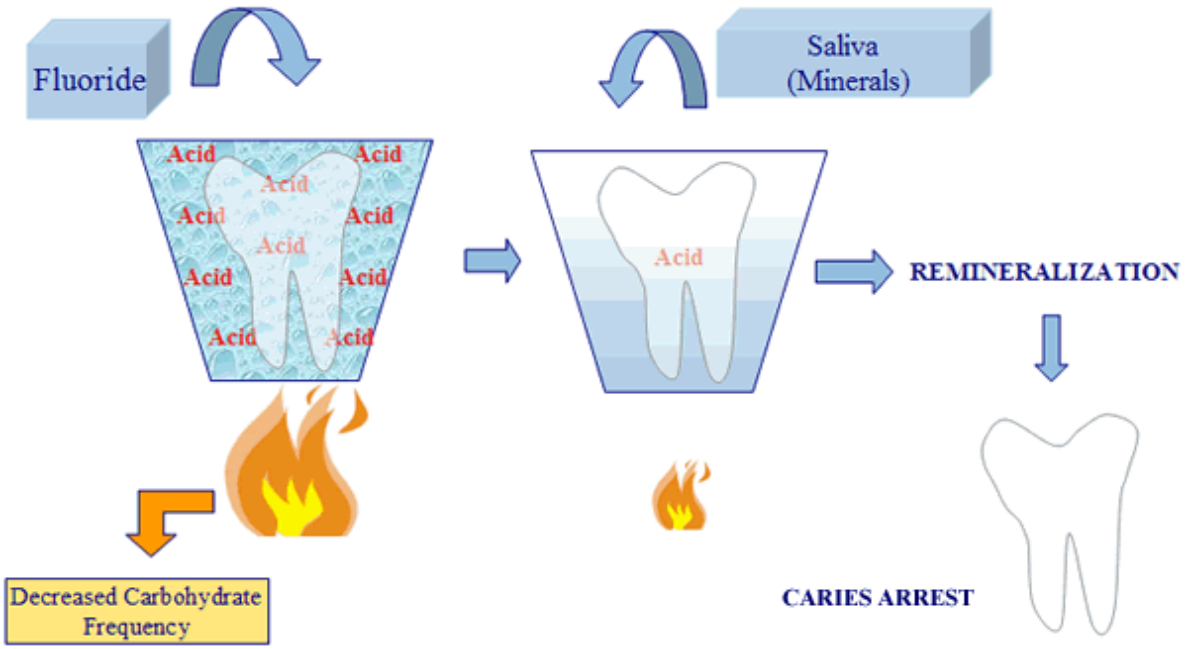


At what stage does de-mineralization start, and when do you first see it?

Demineralization Process



Remineralization Process



Remineralization

Ca +PO4 = Hydroxapatite

Ca + PO4 + Fl- = Fluoroapatite

- Hydroxyapatite
  - *Calcium & Phosphate*
    - *Supplied by saliva*
  - *Natural Tooth Structure*
- Fluoroapatite
  - *Hydroxyapatite in the presence of fluoride*
  - *More resistant to acids*
  - *Not required, but enhances remineralization*

“45-year old male, good oral hygiene. No carious lesions, no lesions restored in the last three years. Diabetic, uses salivary reducing medications, last dental visit 2 years ago with radiographs”.

Low, Moderate, or High Risk???

26-year old male, history of restorations for carious lesions 18 months ago, no missing teeth, carious lesions on teeth #4, #5, #18, and #31. Poor oral hygiene, decalcification numerous cervical areas.

Insurance driven.

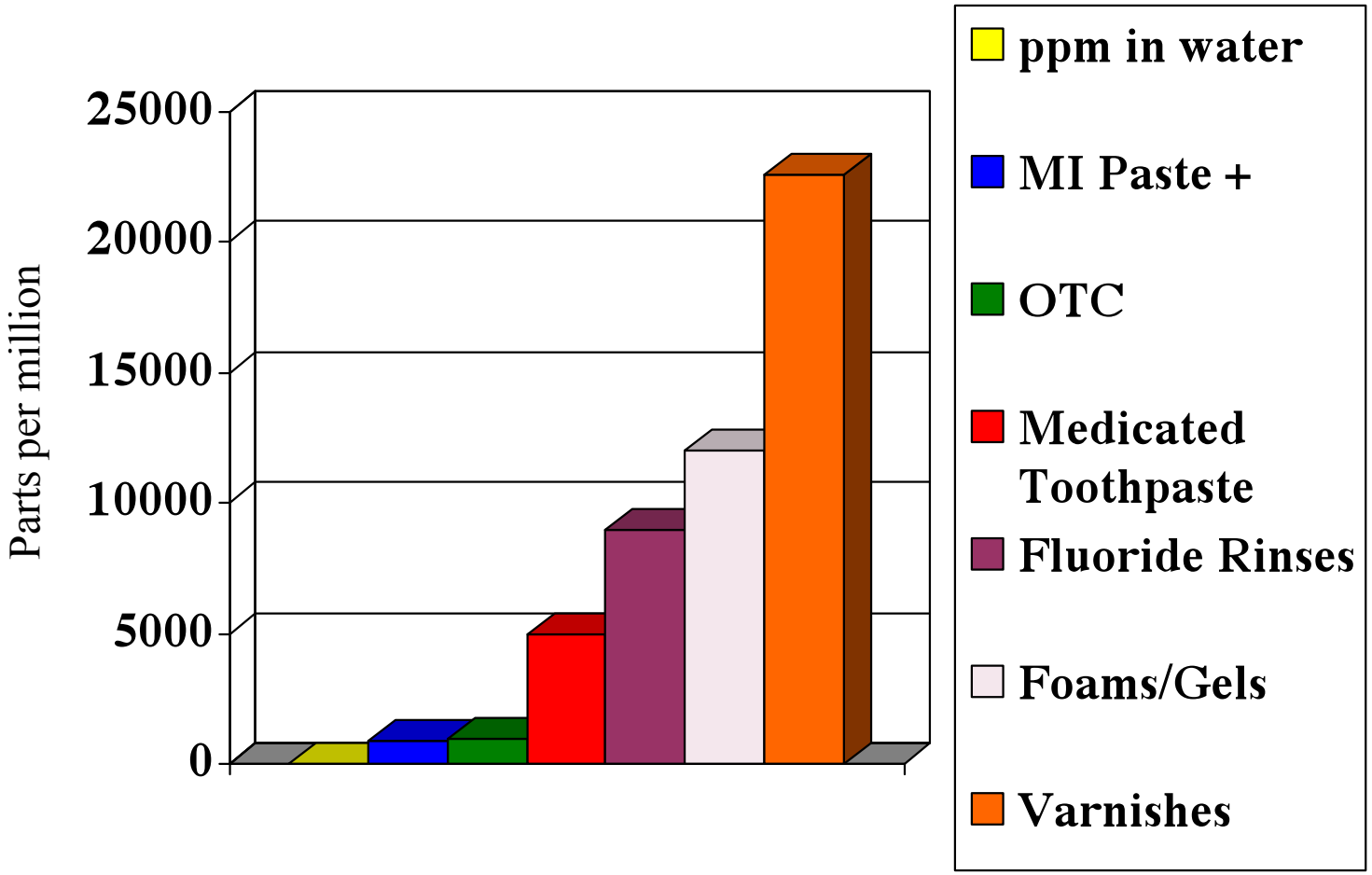
Low, Moderate, or High Risk???

Understanding

PREVENTION

MEDICATIONS

Parts per million of Fluoride



Water Fluoridation Changes 2011

- U.S. Department of Health and Human Services (HHS) and the U.S. Environmental Protection Agency (EPA) changed water fluoridation recommendations
  - *0.7 ppm F rather than range of 0.7 to 1.2 ppm F*
  - *First change in ~50 years*
  - *Change due to additional sources of Fluoride that were less prevalent in previous years*
  - *Maximizes benefit and minimizes unwanted effects*
- Additional supporting information
  - *http://water.epa.gov/action/advisories/drinking/fluoride_index.cfm*

Sodium Fluoride: small ion; has 2 label indication:

- **Caries Control – moderate to high risk caries patients**
- **Sensitivity**
- **It works by strengthening the teeth and decreasing the effects of acid and bacteria on the teeth.**

- ***The American Dental Association recommends that at least 80% of the labeled amount of fluoride is released during tooth-brushing in the first 2 minutes. You must have water in the medication in order for the fluoride to be released to its ionic form.**

Types of Products that have Sodium Fluoride

- **Toothpaste-** OTC: 1100 ppm, Rx: 5000 ppm
  - *Neutral pH- Prescription*
- **Foams & Gels-** 12,300 ppm
  - *1.23 APF*
  - *pH 3.0*
- **Rinses**
  - *2% Neutral pH – 2000 ppm*
  - *1.1 Neutral pH – 5000 ppm*
- **Varnishes** – 22,600 ppm
  - *Neutral pH*

RDA Table

- **0 to 70**
- **Low abrasive**

- **70 to 100**
- **Medium abrasive**

- **100 to 150**
- **Highly abrasive**

- **150 to 250**
- **Regarded as harmful limit**
- *Issue Date: October 2009, Posted On: 11/1/2009 RDH Magazine*

  Polishing Techniques for Beauty and Longevity
  Trish Jones RDH, BS

Sodium Fluoride & Sodium Monofluorophosphate

- NaF
  - *Water soluble*
    - *Patients must wait 30 minutes to eat/drink (except varnishes)*
  - *Hard tissue only*
    - *No or limited gingival benefit*
  - *Non Bacteriocidal*
- MFP
  - *Water soluble*
    - *Patients must wait 30 minutes to eat/drink*
  - *Hard tissue only*
    - *No or limited gingival benefit*
  - *Not readily available*
  - *Non Bacteriocidal*
- See Prescribing Information for complete information

Prescription Level Dentifrices or gels

1.1% Sodium Fluoride (5000 ppm F):

- *First introduced in 1996 by Colgate*
- *Provide over 4 times the fluoride as OTC pastes and gels*
- *Excellent patient compliance due to ease of use*
- *Not to be used by patients < 6 years of age*
- *Indicated for caries prevention*
- *Used off label for treatment of hypersensitivity*

1.1% Sodium Fluoride pastes or gels Prescription Medication

- **Top Brands**
  - ***Clinpro™ 5000***
  - ***Prevident® 5000+***
  - ***Prevident® Booster***
  - ***Fluoridex™ 1.1% Neutral Sodium***

Calcium & Phosphate Technology

- **ACP is inorganic amorphous calcium phosphate, made by combining soluble salts of calcium and phosphorous. When the two salts are mixed, they rapidly form amorphous calcium phosphate that can precipitate onto the tooth surface then dissolve into the saliva to be available for tooth Remineralization. Highly soluble. Not prescription strength.**
- **Recaldent® - ACP-CPP**

  The milk derived peptide containing Ca and PO binds to natural plaque. Holds calcium and phosphate against the tooth surface. Is released during acid challenges. Rinses away easily due to acid challenges throughout the day. Not a prescription strength.
- **Novamin-A synthetic mineral composed of calcium, sodium, phosphorous and silica, all elements naturally occurring in the body. Along with Na+ that increases oral pH, creating the ideal conditions for rapid tooth remineralization. Prescription strength**
- Tri-Calcium-Phosphate- keeps the fluoride, calcium and phosphate **separate until it comes into contact with saliva. The barrier breaks down and makes the fluoride, calcium and phosphate readily available to deposit on the tooth surface to create fluorapatite. Prescription strength toothpaste only.**

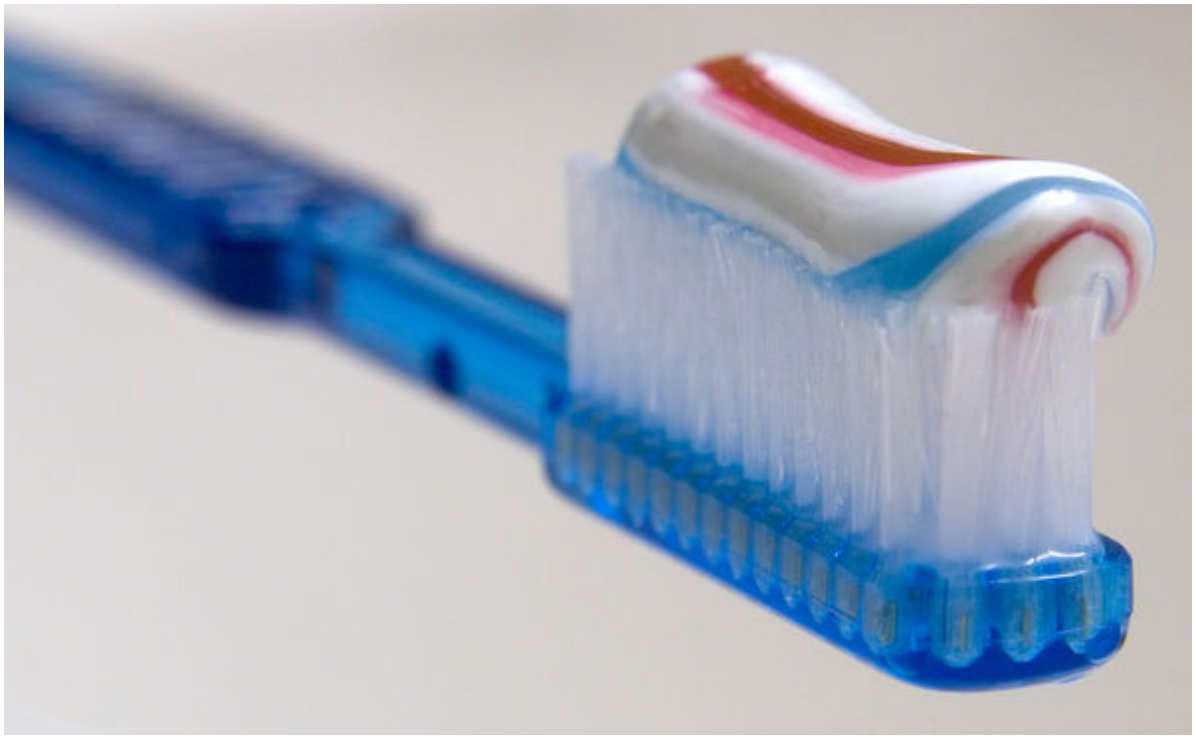
Comparison

- OTC
- Sodium Fluoride only
- Sodium Fluoride with Calcium Phosphate

OVER THE COUNTER TOOTH PASTE

How Much Toothpaste do you put on a ToothBrush?

Aquafresh Curl



Active Ingredients:
Sodium Monofluorophosphate 0.15% or 500ppm
W-V of Fluoride Ion MFP

Sodium Fluoride 900ppm

- 900 ppm Fluoride OTC
- Less effective formula
- 1.4 oz tube – 2-3 months of product
- $13.00 per tube ($9.29 per oz)
- Second hygiene step
- Not sold OTC

PRESCRIPTIVE STRENGTH
1.1% SODIUM FLUORIDE

1.1 % Sodium Fluoride (5000ppm)

- 1.8 oz tube – 3 months of product
- $3.77 per oz
- More abrasive (90-RDA)
- 1.1% Sodium Fluoride Only
- No Calcium

1.1% Sodium Fluoride (5000ppm)

- Liquid formula
- 3.58 oz package
- More abrasive
- 1.1% Sodium Fluoride
- RDA Score 90
- Cost: $7.00 average
- Not sold at Pharmaceys
- No Calcium

1.1 % Sodium Fluoride (5000ppm)

Fluoridex™

1.1% Neutral Sodium Fluoride

- *5000 ppm*
- *Mint Flavor*
- *4oz tube*
- *Cost : $6.50*
- *No Calcium Phosphate*
- *90 RDA score*
- *Instructions: PLACE AT LEAST a 1 inch strip onto a soft bristle toothbrush and brush for 1 minute.*

Prescriptive Strength

1.1 % Sodium Fluoride

With

Calcium and Phosphate

Clinpro™ 5000

1.1% Sodium Fluoride Anti-Cavity Toothpaste with Tri-Calcium Phosphate

- *5000 ppm Sodium Fluoride*
- *Innovative formula containing Tri-Calcium Phosphate technology (TCP)*
  - *2 proven technologies in 1 product (5000 ppm F & Calcium Phosphate)*
- *Remineralizes more effectively than leading br*
- *RDA score of 60-gentle on root surfaces*
- *Vanilla Mint flavor*
- *4 oz package (6 month supply)*
- *One step patient use*
- *Introduced to market January 2009*

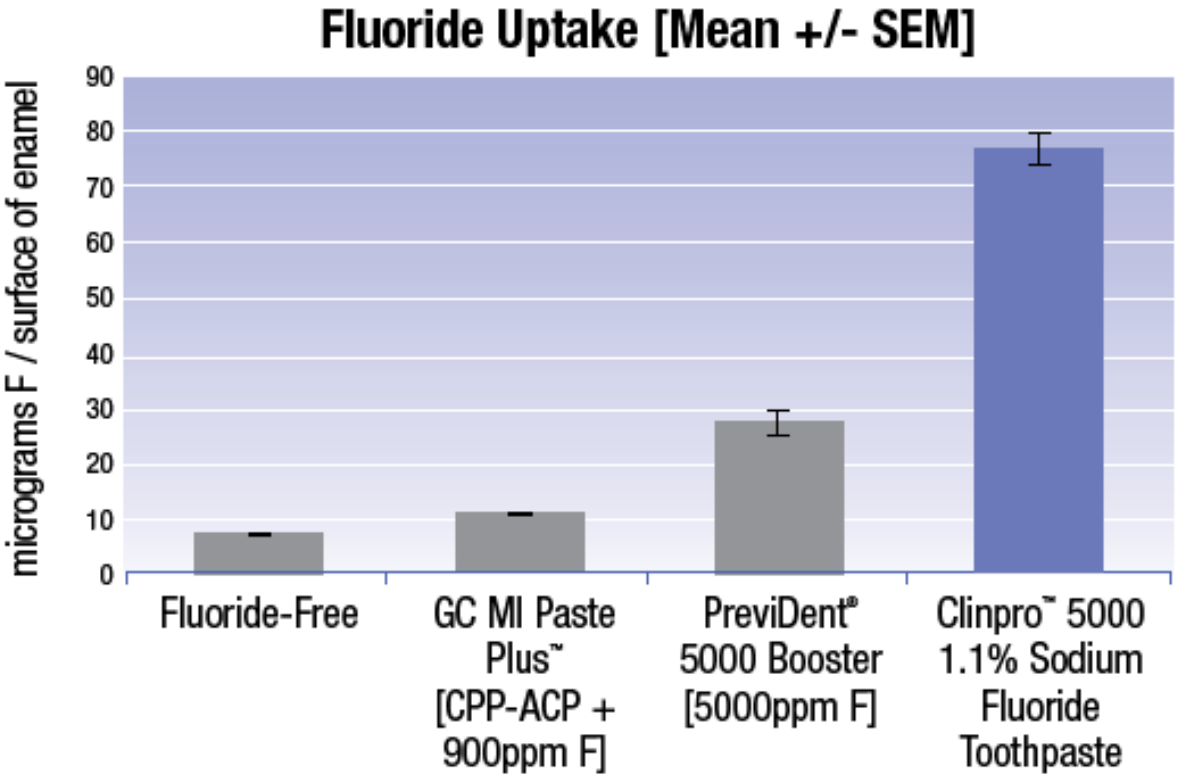
3M ESPE

Clinpro™ 5000

1.1% Sodium Fluoride
Anti-Cavity Toothpaste

Better Fluoride Uptake

Clinpro™ 5000 1.1% Sodium Fluoride Anti-Cavity Toothpaste exhibited greater fluoride uptake than GC MI Paste Plus™ and PreviDent® 5000 Booster, suggesting an equal or greater anticaries potential for Clinpro 5000 toothpaste.

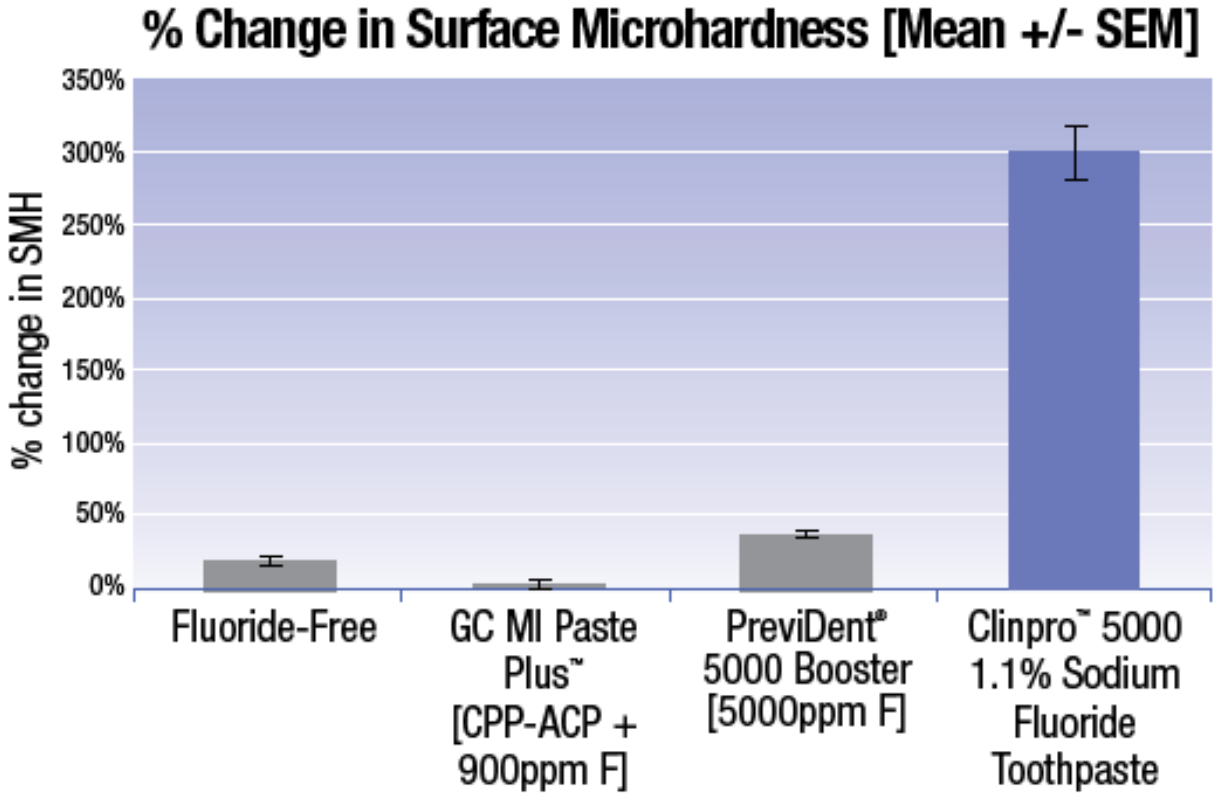


Source: 3M ESPE internal data

Methodology:
Fluoride concentration in enamel specimens was measured after 20 days of pH cycling that included fluoride treatments and periods of demineralization and remineralization.

Better Remineralization

Clinpro 5000 toothpaste exhibited greater remineralization than GC MI Paste Plus and PreviDent 5000 Booster, strengthening teeth better.



Source: 3M ESPE internal data

Methodology:
Remineralization was determined using surface microhardness recovery after 20 days of pH cycling that included fluoride treatments and periods of demineralization and remineralization.

Clinpro™ 5000

- Prescription strength
- FDA approved claims for prevention of caries
- Once per day, substitutes for conventional toothpaste
- Fluoride uptake over 7x than any other medicated toothpaste
- Vickers microhardness increase over 10x harder than any other medicated toothpaste
- 4 oz tube
- Cost $11.87 per tube
- 3 Flavors: Vanilla Mint, Spearmint, Bubble Gum

ACP **Sodium Fluoride** **Tri-Calcium**

FLUORIDE VARNISHES

- *Approved in US in 1994 (Europe 1960's)*
- *US FDA label indication- Cavity liner and hypersensitivity*
- *Used off label as fluoride treatment*
- *Long lasting resin (24 to 48 hours)*
- *Safe for all pediatric patients*
- *5% Sodium Fluoride, 22,600 ppm F*
- *White (invisible) or yellow color on teeth*
- *Less F ingestion compared to tray delivered gels and foams*
- *Easy to apply*
- *No waiting to eat or drink*

"Fluoride Varnishes: A Review of Their Clinical Use, Cariostatic Mechanism, Efficacy and Safety",

Beltran-Aguilar, E., et al, Journal of the American Dental Association, Vol. 131, May 2000: pp.589-596.

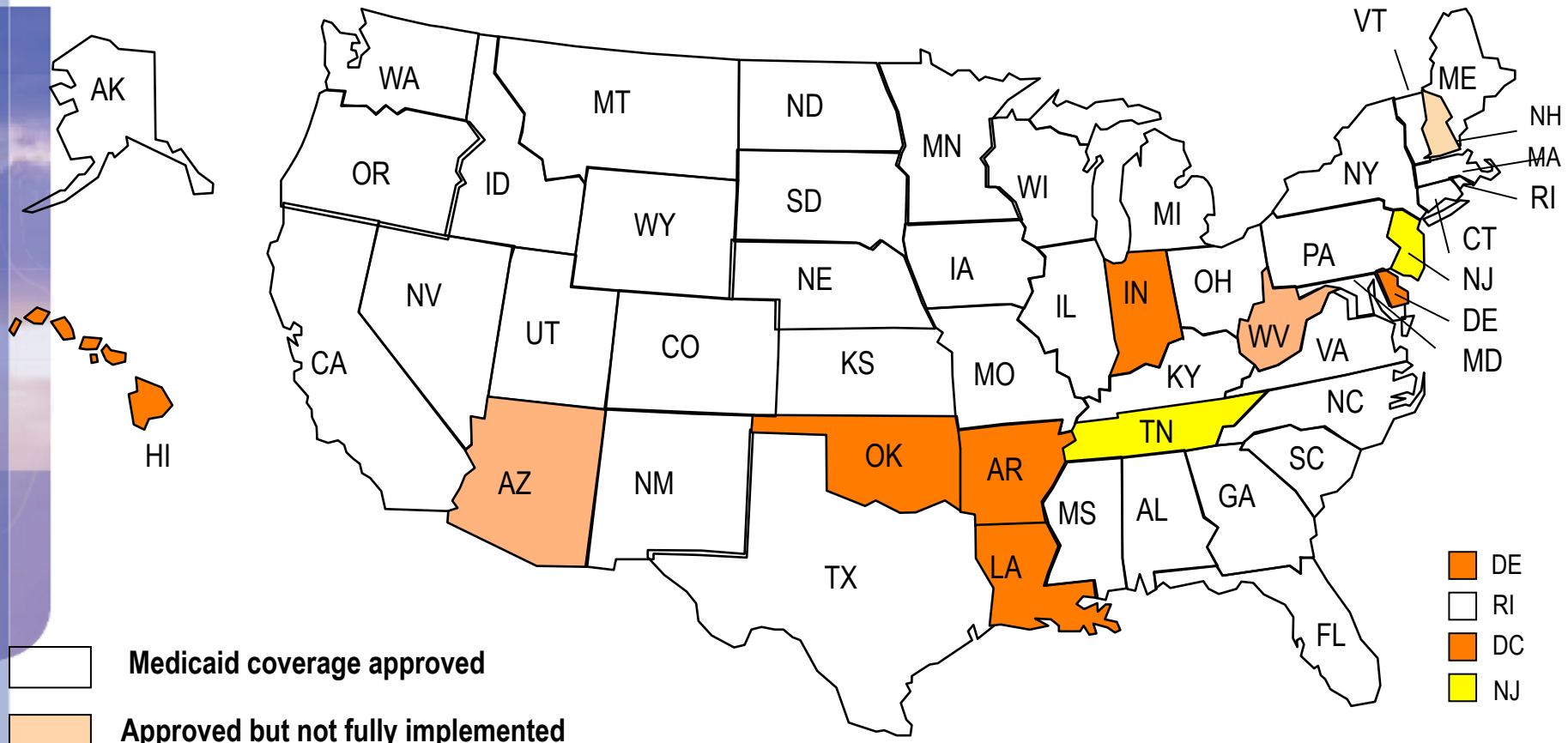
"…after 2.5 years, the varnish resulted in a higher percentage of caries reduction (74 percent) than did the NaF solution (28 percent) and the APF gel (37 percent)."

CHARACTERISTICS of Varnishes

22,600 ppm NaFl-

- Label Indication: Hypersensitivity
- Color
- Flowable
- Do you have to dry the teeth?
- Can they eat and drink ?
- Is it Tenacious?
- Cost
- Flavors
- Post op directions
- Is the Dr. able to apply it?

States with MEDICAID Funding for Physician Oral Health Screening and Fluoride Varnish



Medicaid coverage approved

Approved but not fully implemented

Only in certain circumstances

Reimbursement not yet approved

Version: 8/11

http://www.mchoralhealth.org/feedback/reimbursementchart6_08.pdf

VarnishAmerica™

- *5% Sodium Fluoride*
- *Contains xylitol (quantity unknown)*
- *0.25mL and 0.40mL sizes*
- *Remove excess saliva with a gauze sponge*
- *Bubble Gum Raspberry Flavor*
- *No Calcium Technology*

Varnish America™ Directions for use

- Using gentle finger pressure, open the child's mouth.
- Remove excess saliva with a gauze sponge.
- Use your fingers and sponges to isolate the dry teeth and keep them dry. You will usually be able to isolate a quadrant of teeth at a time, but may have to work with fewer teeth in some children. Infants are easiest because they have only anterior teeth.

Apply a **thin** layer of the varnish to **all surfaces of the teeth.** Avoid applying varnish on large open cavities where there may be pulp involvement. Once the varnish is applied, you need not worry about moisture (saliva) contamination. The varnish sets quickly.

- **Colgate PreviDent® Varnish**
  - *5% Sodium Fluoride*
  - *.40mL unit doses*
  - *Manufactured by Colgate Professional*
  - *Wash and dry tooth surface prior to application*
  - *Raspberry or Mint Flavor*
  - *No Calcium Technology*

ClearShield 5% Sodium Fluoride Varnish

- 5% Sodium Fluoride
- 0.40 mL unit dose package
- Manufactured by Kolorz
- Drying the teeth is recommended before applying
- Sweeten with Xylitol
- Bubble-gum and Watermelon Flavors
- No Calcium Technology

- **Enamel Pro® Varnish**
  - *5% Sodium Fluoride*
  - *Contains Amorphous Calcium Phosphate*
  - *0.25mL and 0.40mL sizes*
  - *Dry teeth first before applying*
  - *Sweeten with Xylitol*
  - *Bubble Gum or Strawberry n' Cream Flavors*

- Tooth Surface should be clean and dried before application
- Do not use on patients with a milk protein allergy
- Mi Paste should remain on the teeth undisturbed for four hours
- Flavors: Strawberry Cream

Vanish™

5% Sodium Fluoride White Varnish
with Tri-Calcium Phosphate

- *1st varnish to be invisible on teeth*
- *Calcium & Phosphate technologies*
- *Teeth must be wet but not saturated with saliva*
- *Tenacious on teeth—stays put!*
- *Contains Xylitol*
- *Seconds to apply*
- *Mint, Cherry, and Melon Flavor*

Bleeding Gums or Gingivitis

Stannous Fluoride: Large ion, greater substantivity- 8 to 10 hours

A fluoride salt of tin used in toothpaste and mouth rinses to reduce dental caries incidence and as an anti-plaque agent.

Label Indications:

Inflammation – Perio Patients

Hypersensitivity – Root exposure, Abfractions

Caries Control – Moderate to High Risk

0.12% Chlorhexidine

- Chlorhexidine is recognized as the gold standard anti microbial in oral hygiene.
- Antiseptic
- Kills viruses, plaque, funguses, and microbes
- Rinse with 15mL for 30 seconds twice a day
- Significant reductions in plaque, gingivitis and bleeding sites.

0.12% Chlorhexidine Rinses

- Kill bacteria and virus for up to 12 hours
- FDA Label indicated for gingival bleeding
- 17 Generic brands
- Eliminates pathogenic bacterial infection

Medication Protocol for Soft Tissue Management

- Gingivitis
  - *Gingivitis Therapy Treatment*
    - *Rinse with Stannous Fluoride*
    - *Re-evaluate in 3 months*

- **Periodontal Disease**

  -SRP

  - Rinse with CHX for up to 2 weeks only
  - Maintain with Stannous Fluoride
  - Re-evaluate in 6 weeks to 3 months

“Laboratories want better impressions”

Gordon J. Christensen, DDS, MSD, PhD
JADA, Vol 138, April 2007, p. 527-29.

“Patients planning to receive multiple crowns or fixed prostheses should use 0.12% chlorhexidine mouth rinse twice per day for one week before teeth are prepared….Soft tissues will be pink and firm…and bleeding will be minimal or nonexistent.”

SENSITIVITY

How do you treat it?

Today's Oral Health: Protecting Roots from Caries and Sensitivity

Exposed Roots are High Risk!!!!!!!!!!!!!

- 57% of the general population have dentinal hypersensitivity.
- 98% of Periodontal patients have dentinal hypersensitivity.
- Abrasive over-the-counter and prescription toothpastes are contributing to the rise in sensitivity in adult patients
- Dentin has about a quarter of the hardness of enamel
- Fact: **Slicker, Harder teeth have Less stain, plaque, & debris and guess what! No Sensitivity!**

Potassium Nitrate 5%

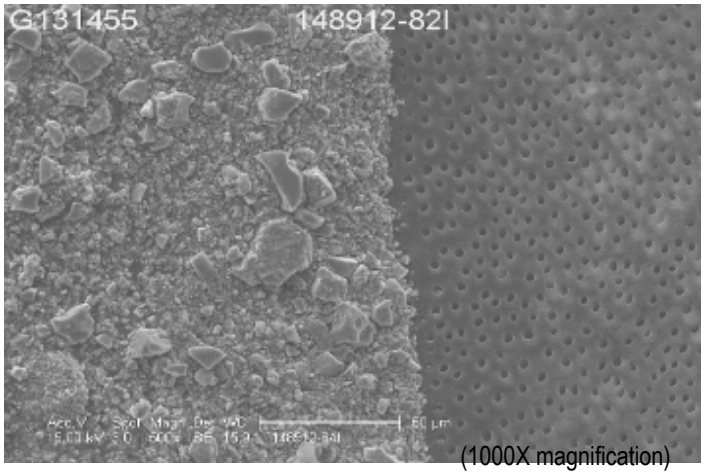
- Potassium nitrate desensitizes the nerve.
- Potassium ions penetrate through the dentinal tubules to depolarize the nerves and prevent repolarization from occurring.
- This blocks pain signals to the brain. It works like an analgesic by numbing the nerve and masking the pain as opposed to fixing the problem.
- All OTC sensitivity pastes contain 5% potassium nitrate.

Vanish XT

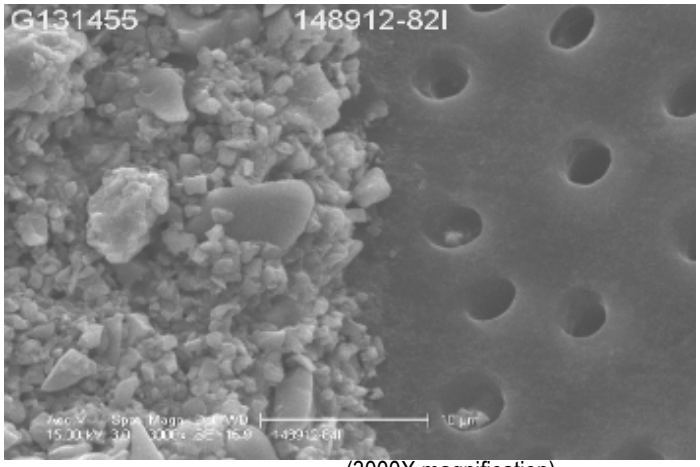
- Site-specific, durable protective coating for enamel and dentin tooth surfaces
- Light-cured resin modified glass ionomer - two-part liquid/paste system.
  - *All the major benefits of glass ionomer materials*
  - *Sustained fluoride, calcium and phosphate release.*
- Clicker™ Dispensing Syst
- Prolonged working time
- 20 second light cure

Immediate Occlusion of Dentin Tubules

Vanish™ XT Extended Contact Varnish immediately after application to dentin. Exposed dentin tubules can be seen on the right; coated and sealed dentin tubules can be seen on the left.

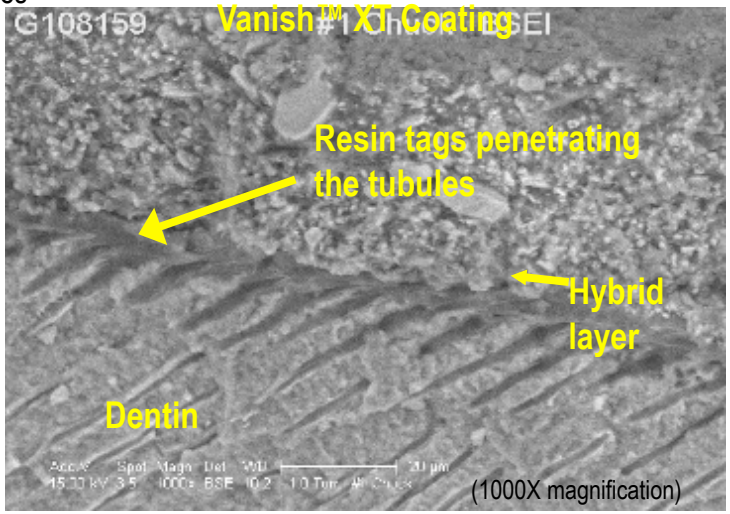


(1000X magnification)



(3000X magnification)

Cross-sectional view of Vanish™ XT Extended Contact Varnish applied over exposed dentin tubules

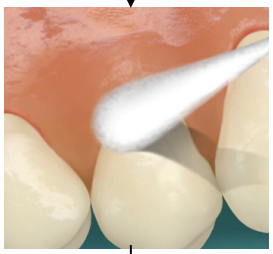


(1000X magnification)

Application Technique – Sensitivity

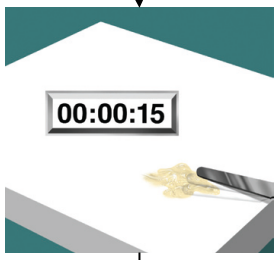
1. Clean the tooth surface

2. Rinse with water



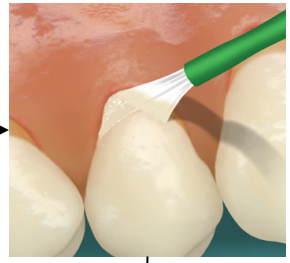
3. Dry with cotton applicator

4. Dispense Vanish™ XT onto mixing pad



5. Mix components together rapidly for 15 seconds

(2.5 min. working time)



6. Apply thin layer of Vanish XT to tooth surface

7. Light cure for 20 seconds

8. Wipe the coating with a moist cotton applicator

Xylitol

- May reduce the risk of tooth decay
  - *Certain bacteria (i.e. strep mutans) can't digest xylitol*
    - *They can't create the destructive acids that demineralize enamel*
- Helps promote saliva flow to neutralize pH of mouth
- Readily available
  - *Gums*
  - *Candies (mints)*
- Requires long-term therapy
- Patient compliance is needed
- Acts as laxative in high quantity
- Caries Risk patients must use 100% Xylitol
  - *Moderate Risk 2 grams 3 times a day*
  - *High Risk – 2 grams 5 times a day*

Restoration Protection
One treatment in two parts

- **Home care review**
- **In office varnish with TCP for sensitivity and caries protection (off label).**
- **Home care 5000 ppm with TCP for caries protection and sensitivity (off label)**

Treat the symptom and the cause.

Re-Care Appointment

Child Prophy	$85.00
Caries susceptibility test	$ .00
Intra-Oral Camera	$ .00
Irrigation with Chlorhexidine	$ .00
Nutritional Counseling	$ .00
Oral Hygiene Instructions	$ .00
Application of desensitizing medicament	$ .00
Oral Cancer Screening	$ .00
Comprehensive periodontal evaluation	$ .00
Complimentary “Toothbrush, Floss, D0999	$ .00
Blood Pressure	$ .00

Total Due

$85.00

QUESTIONS

THANK YOU!