

# Understanding and Treating Dental Caries in Children and Young Adults: It's Not Just Filling Teeth



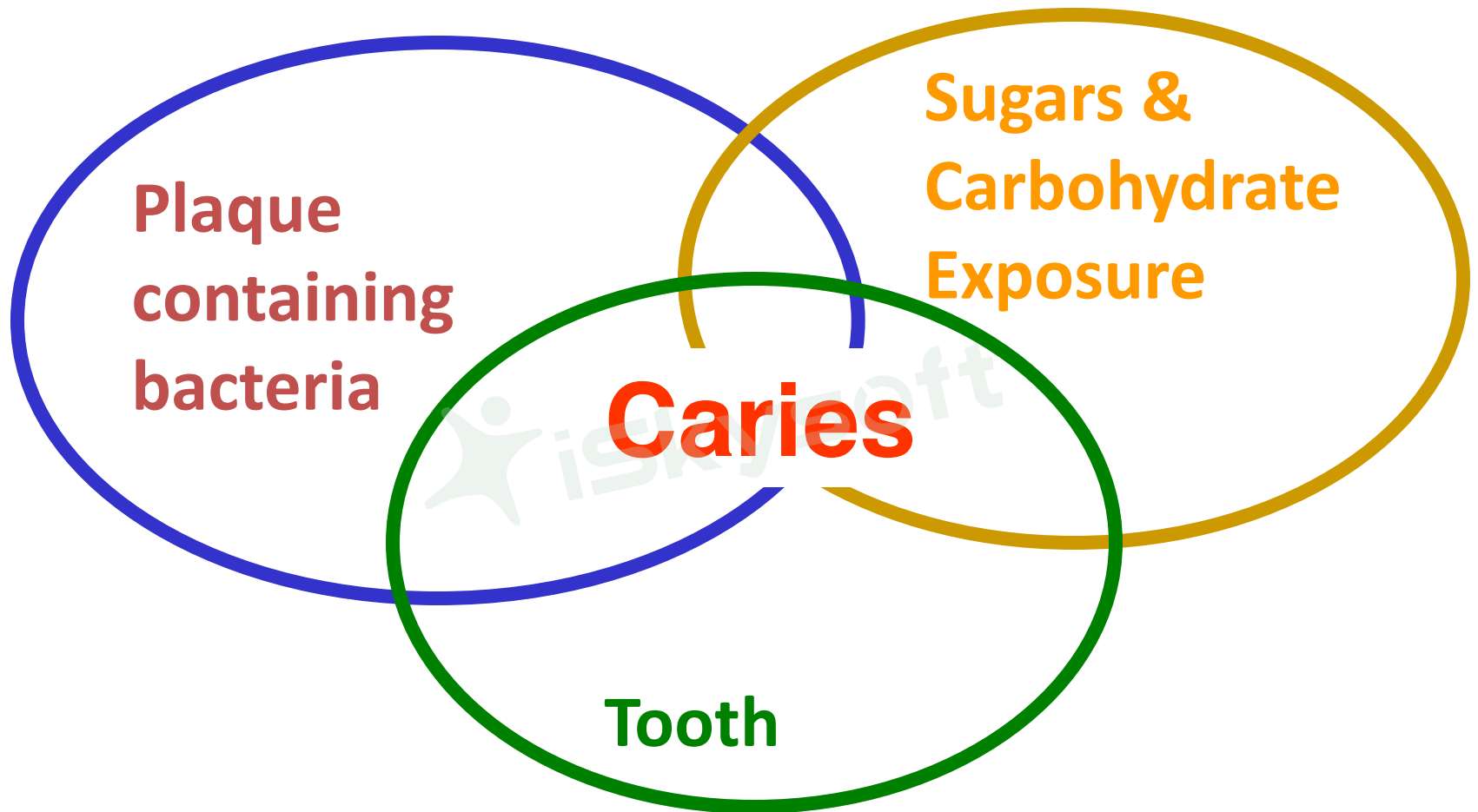
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*Paediatric dentist*  
*Doctor of Philosophy*  
*Assistant professor*

# What is Caries?

**Dental caries is a ubiquitous, multifactorial, communicable disease exhibiting itself as demineralization of dental hard tissues caused by acid-producing bacteria found in intraoral biofilm in the presence of EF carbohydrates, leading to cavitation**

***Caries is transmissible (contagious) bacterial pathological process, initiated predominantly by S.mutans from dental plaque, reversible on its early stage, that reflects change in one or more significant factors of oral equilibrium, originates in subsurface enamel layer and results in destruction of tooth structure***

# Elements involve in the Caries Process



**When all three are present, and enough time passes, large carious lesions will occur**

**B**ad Bacteria

**A**bsence saliva

**D**ietary habits poor

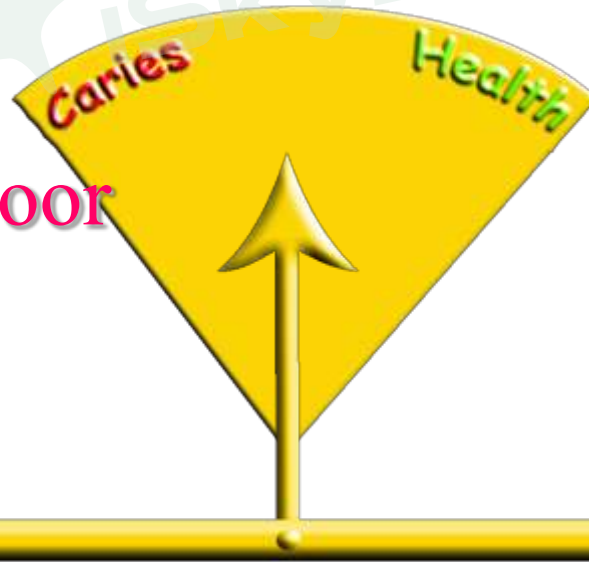
**S**aliva  
adequate

**A**nti-  
microbial

**F**luoride

**E**ffective diet

iskysoft



# The Caries Balance

## Pathological Factors

- Acidogenic Bacteria (S. Mutans, S. Sobrinus & Lactobacilli)
- Reduced Salivary Flow
- Frequency of fermentable carbohydrate ingestion

## Protective Factors

- Saliva flow & components
- Proteins, calcium, phosphate, fluoride, immunoglobulins
- Antibacterials  
In saliva and extrinsic  
Fluoride, Chlorhexidine, iodine

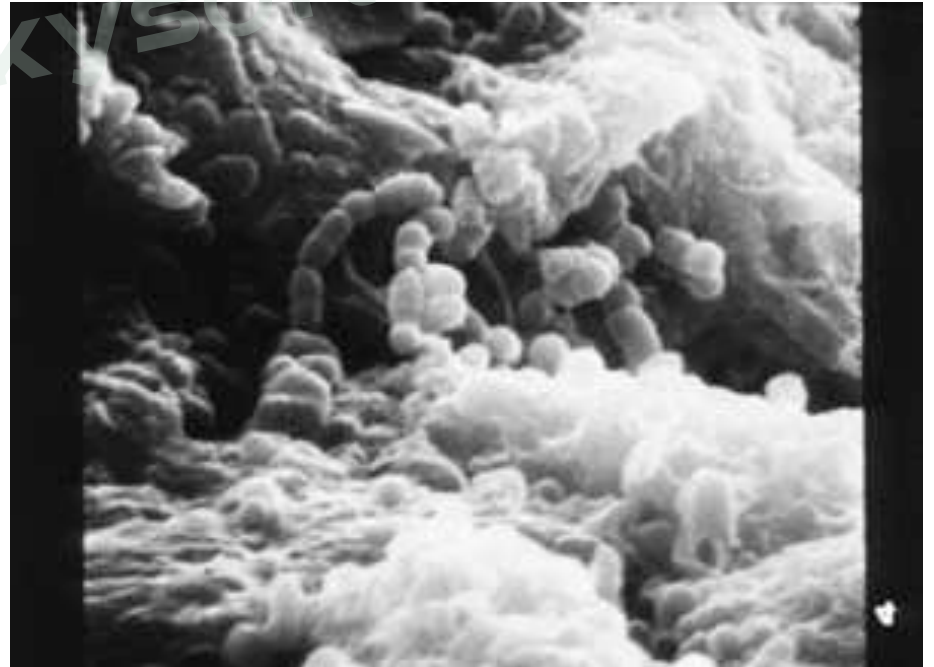
**Caries**

**No Caries**

Adapted from Featherstone, J. D. B., JADA 2000

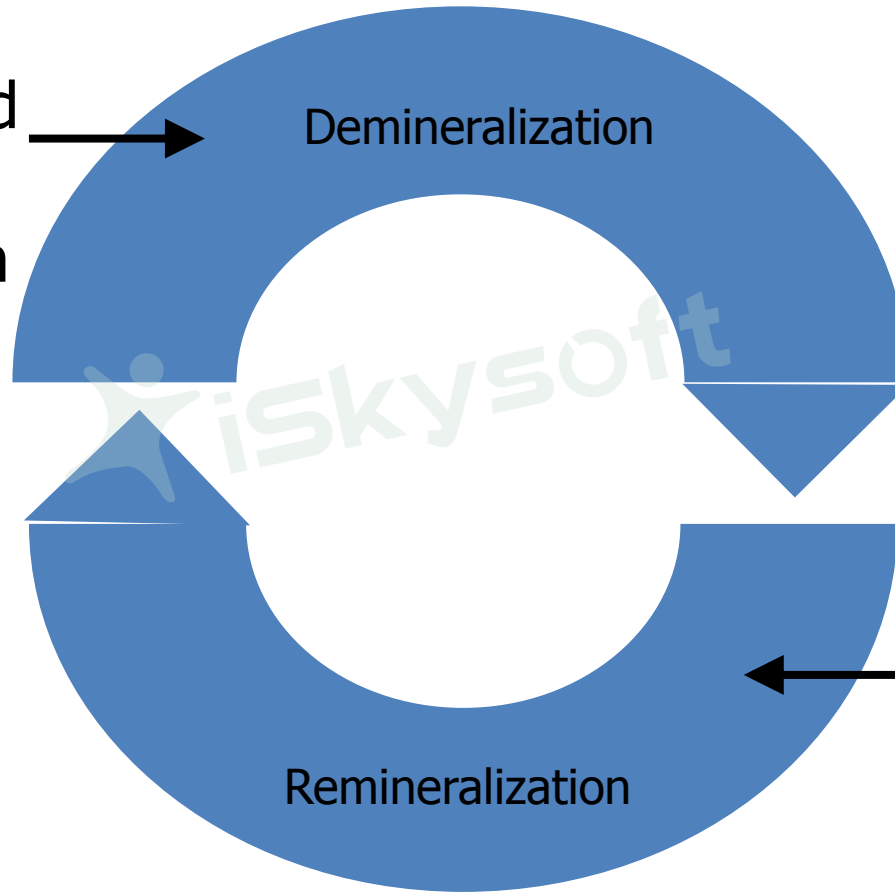
# Bacteria Involved in Caries

**Streptococcus Mutans,  
Streptococcus Sobrinus  
Lactobaccillus**



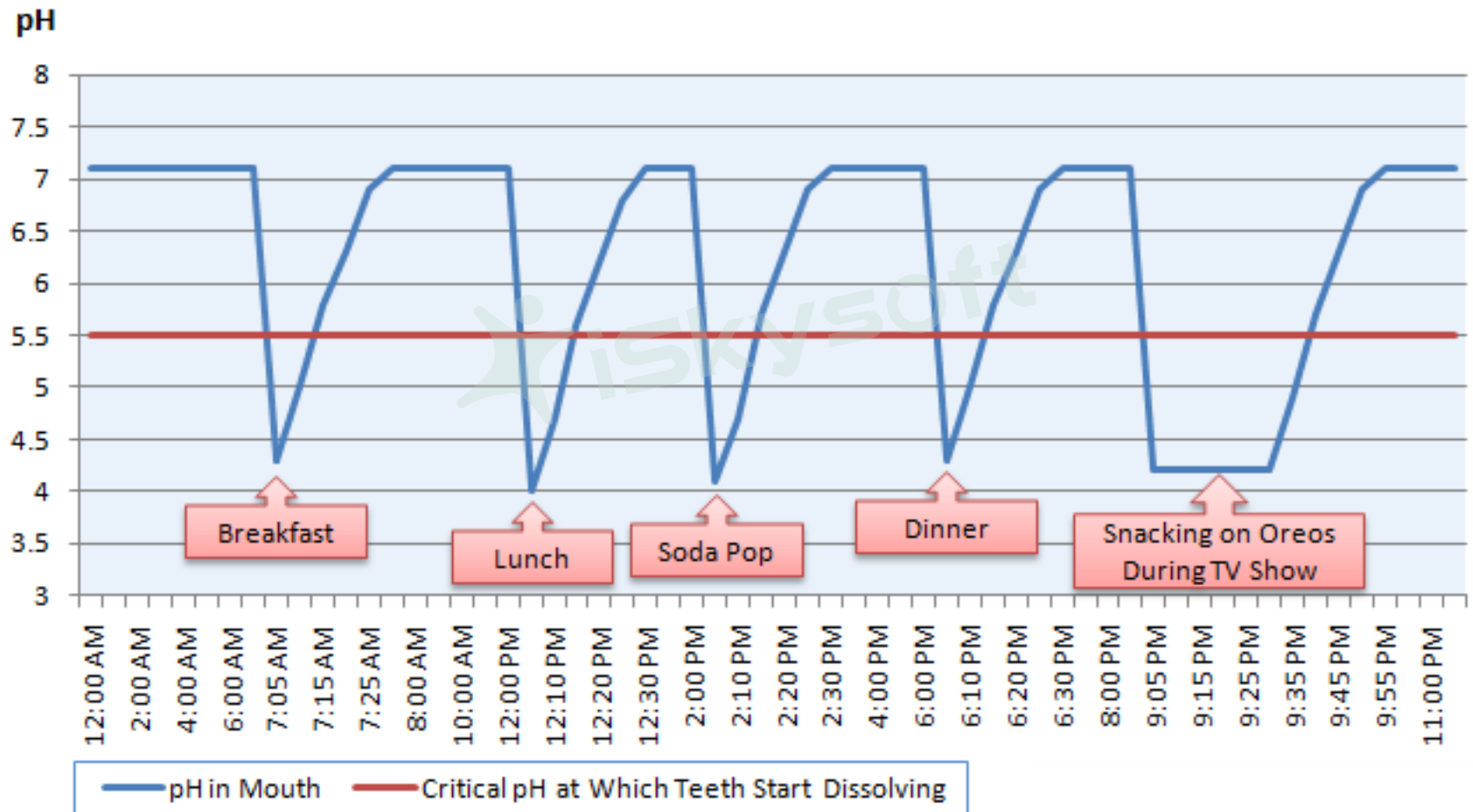
# Cyclic Process of Decay

Bacteria plus food  
makes the saliva  
very acidic within  
5 minutes



Saliva pH is  
normal  
30 minutes  
after eating

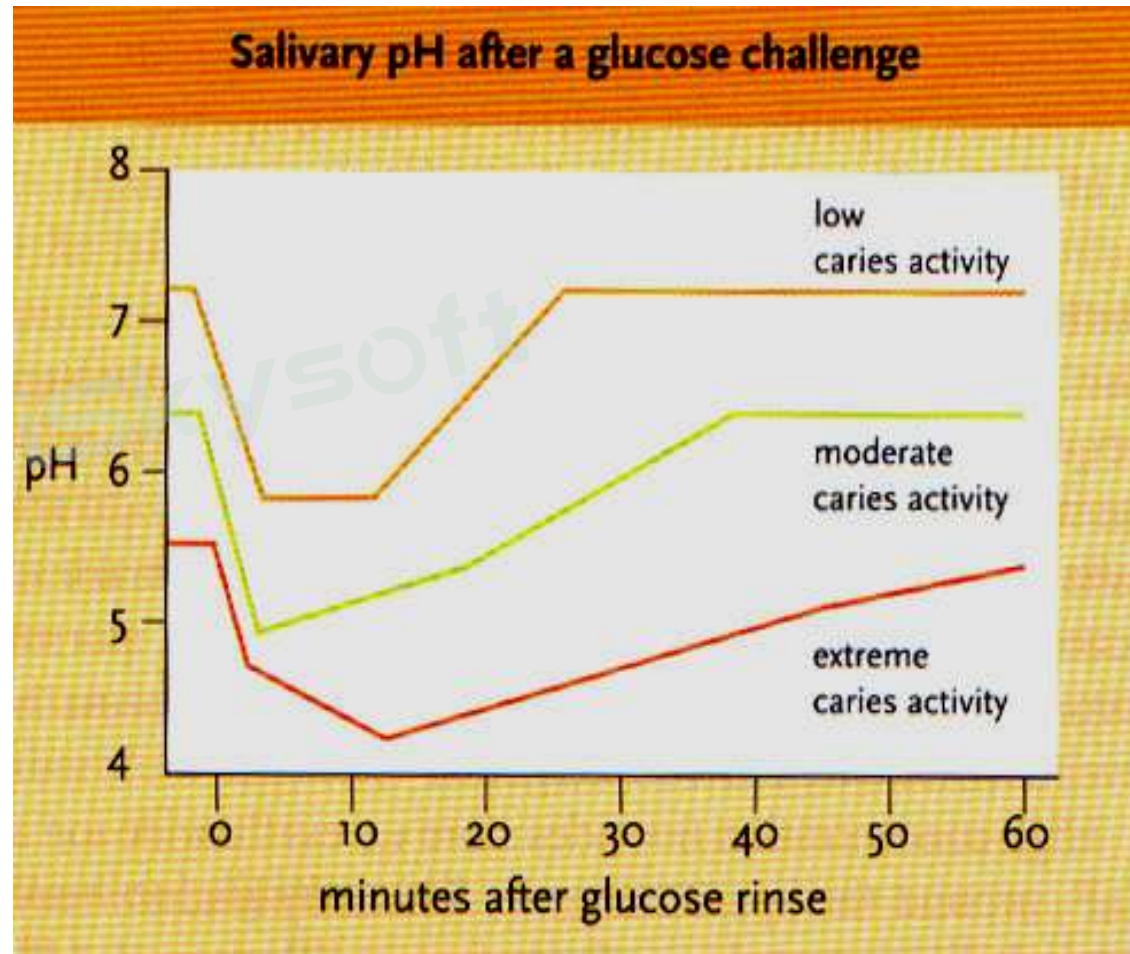
# pH Change During the Course of The Day





# What Contributes to the Extent of pH Drop after Glucose Exposure?

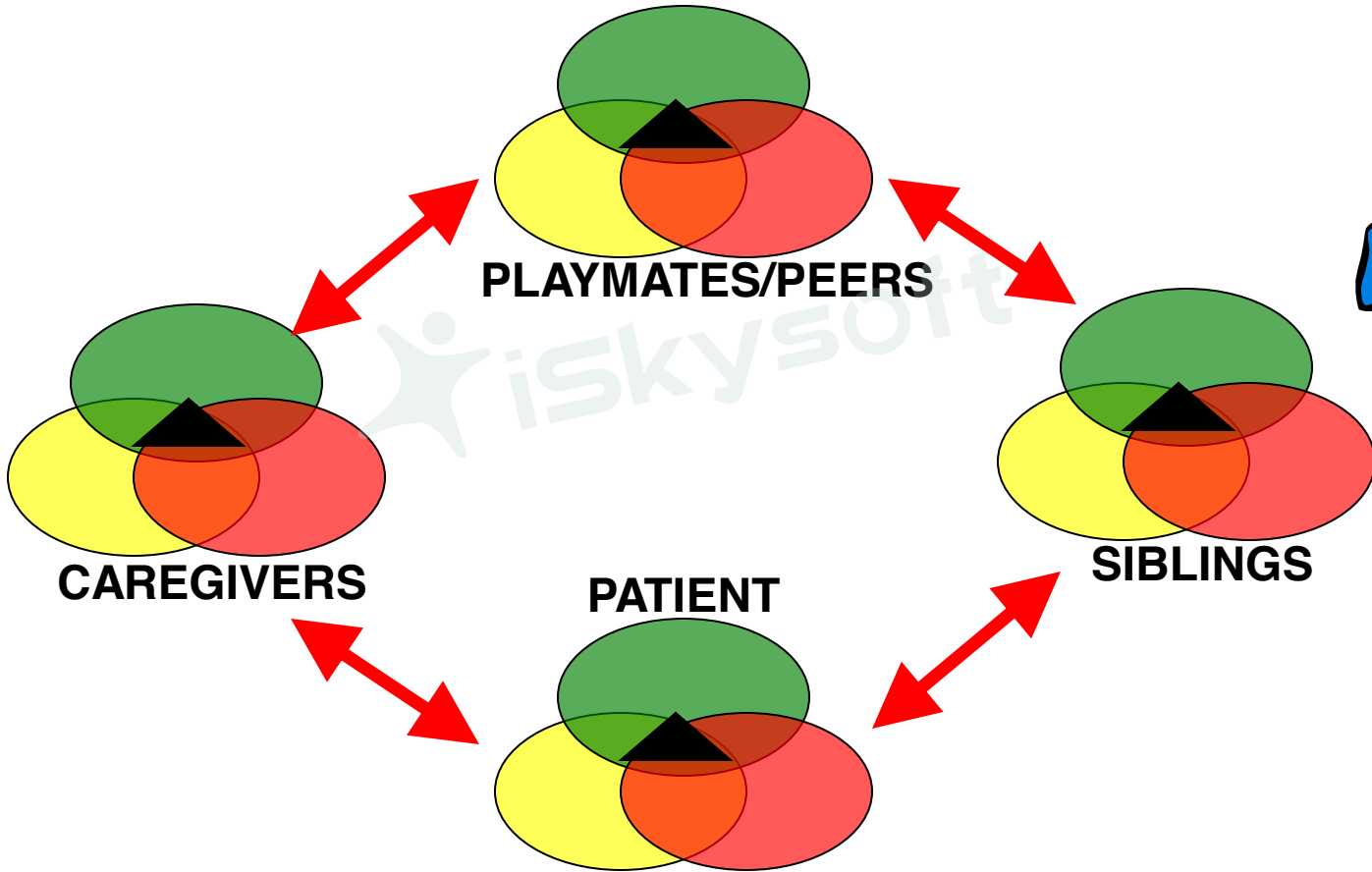
- Type & amount of carbohydrate available
- Bacteria present
- Salivary composition & flow
- Other food ingested
- Thickness and age of dental plaque



# Caries Risk Factors

- **Low Socio-economic Status**
- High Titers Of Cariogenic Bacteria
- Poor Oral Hygiene & Cariogenic Diet
- Poor Family Dental Habits & Irregular Access to Dental Care
- Developmental Or Acquired Enamel Defects
- Genetic Abnormality Of Teeth
- Many Multi-surface Restorations (High DMFT, DMFS)
  - Restoration Overhangs And Open Margins
- Eating Disorders
- Drug Or Alcohol Abuse
- Active Orthodontic Treatment
- Presence Of Exposed Root Surfaces
- Physical Or Mental Disability With Inability Performing Oral Health Care
- Xerostomia: Medication, Radiation Or Disease Induced

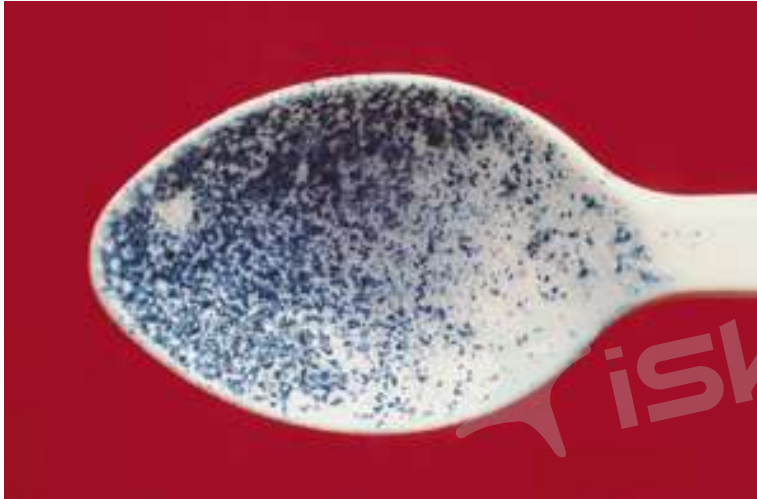
# Web of Transmission



## *Streptococcus mutans* Transmission



# Mode of Transmission

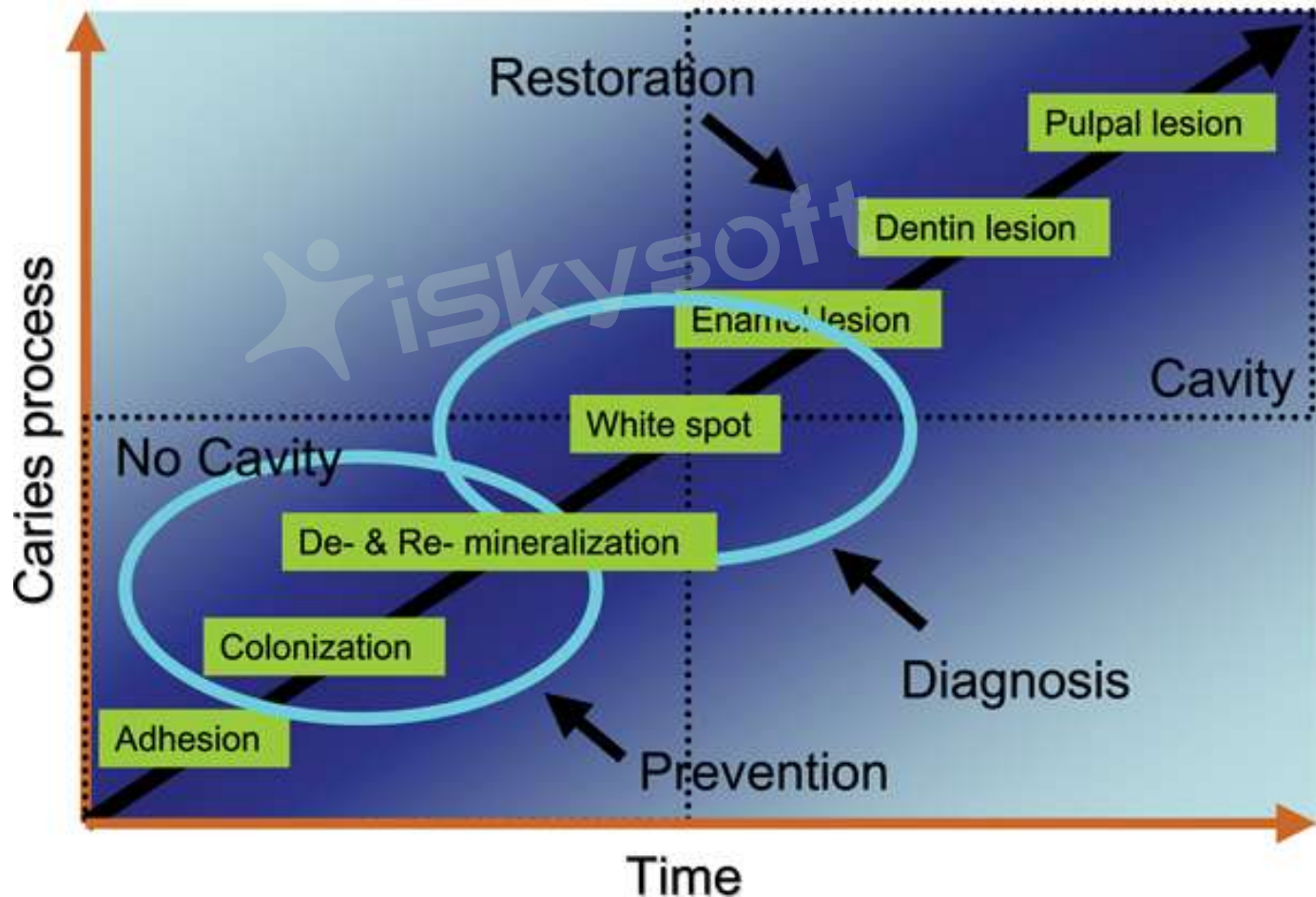


Both this spoon and pacifier have been in the mouth and then cultured in a selective broth. They show *S. Mutans* growing on them.

Courtesy of Ivoclar Vivadent.

# Caries Evolution

## The Caries Evolution

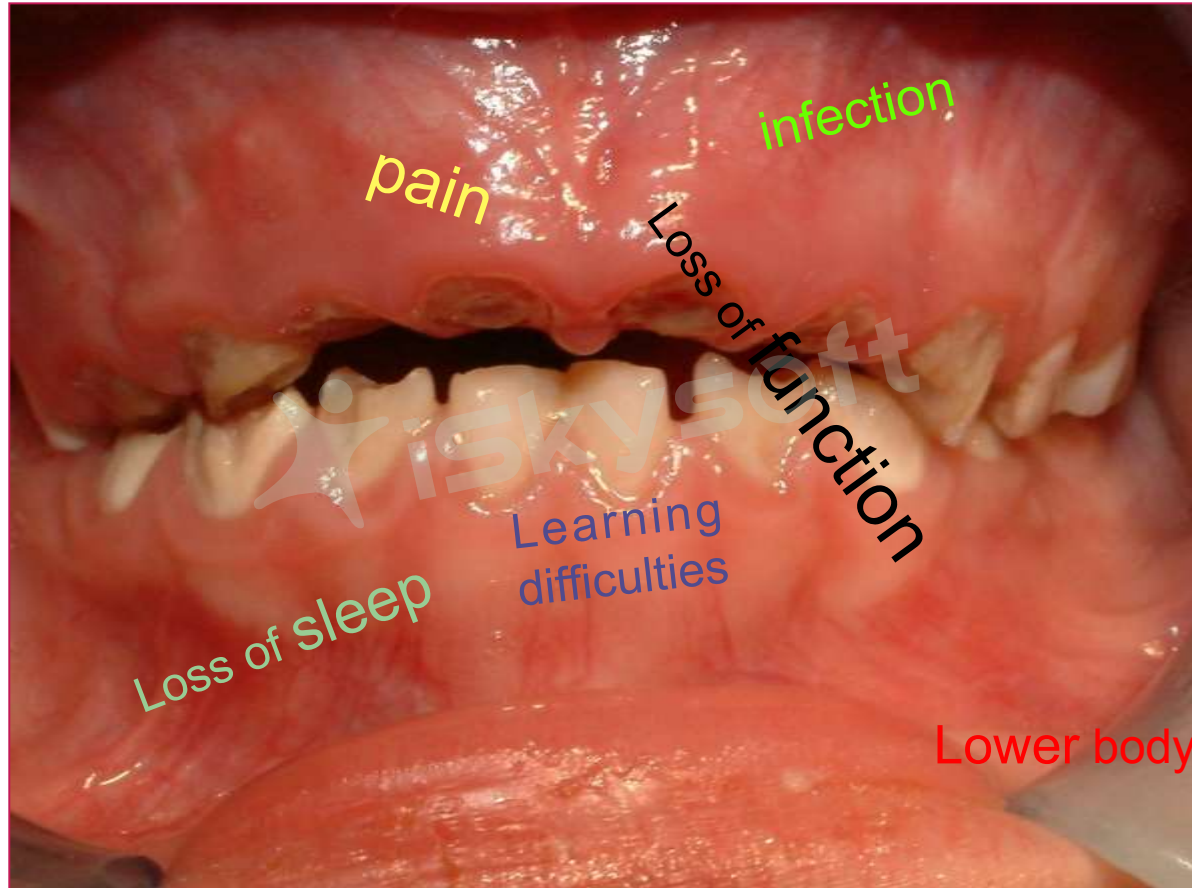


# Facial Cellulitis

Infection spreading into surrounding tissues



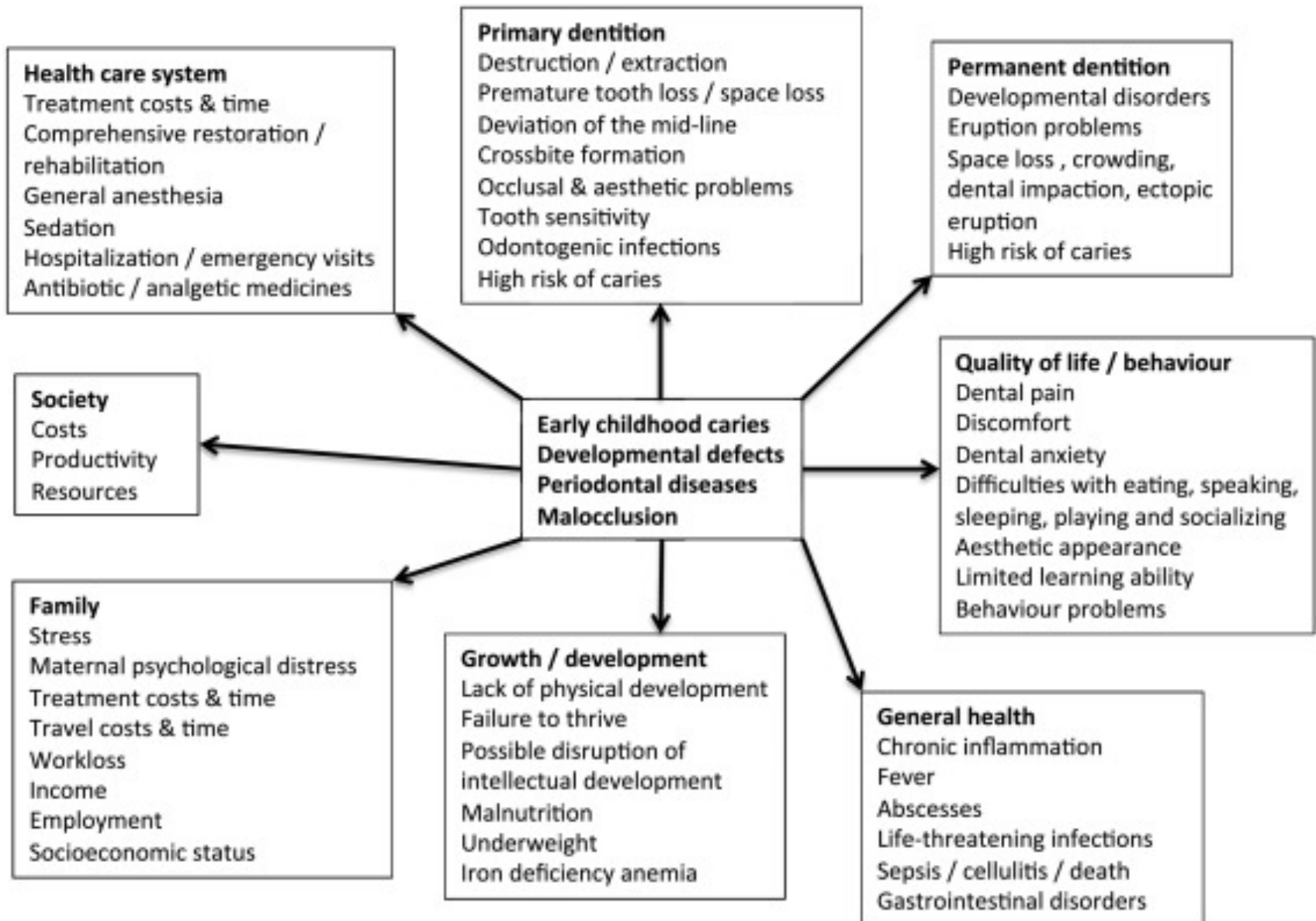
# Detrimental Health Effects Of ECC



**A VERY BIG DEAL**



# CONSEQUENCES OF CARIES





# World health organization (WHO) system

In this classification the shape and depth of the caries lesion scored on a four point scale

- D1. clinically detectable enamel lesions with intact (non cavitated) surfaces
- D2. Clinically detectable cavities limited to enamel
- D3. Clinically detectable cavities in dentin
- D4. Lesions extending into the pulp

# Caries Progression



# Stages of the carious lesion

D1 (enamel lesion, no cavity)

D2 (enamel lesion, cavity)

D3 (dentin lesion, open/closed)

D4 (lesion into the pulp)



## INCIPIENT CARRIES

- The early caries lesion,
- best seen on the smooth surface of teeth, is visible as a *'white spot'*.
- Histologically the lesion has an apparently intact surface layer overlying subsurface demineralization.
- Significantly may such lesion can undergo remineralization and thus the lesion per se is not an indication for restorative treatment

# Caries Progression



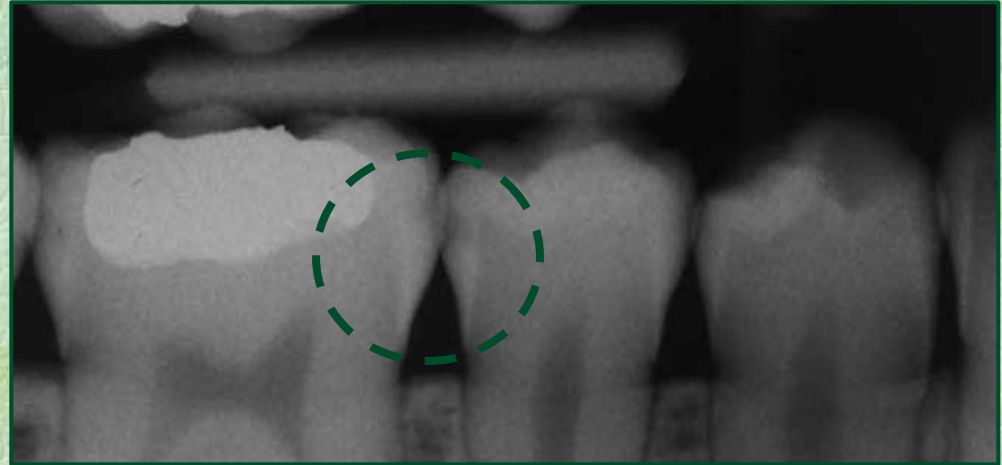
# Stages of the carious lesion

D1 (enamel lesion, no cavity)

**D2 (enamel lesion, cavity)**

D3 (dentin lesion, open/closed)

D4 (lesion into the pulp)



# Caries Progression



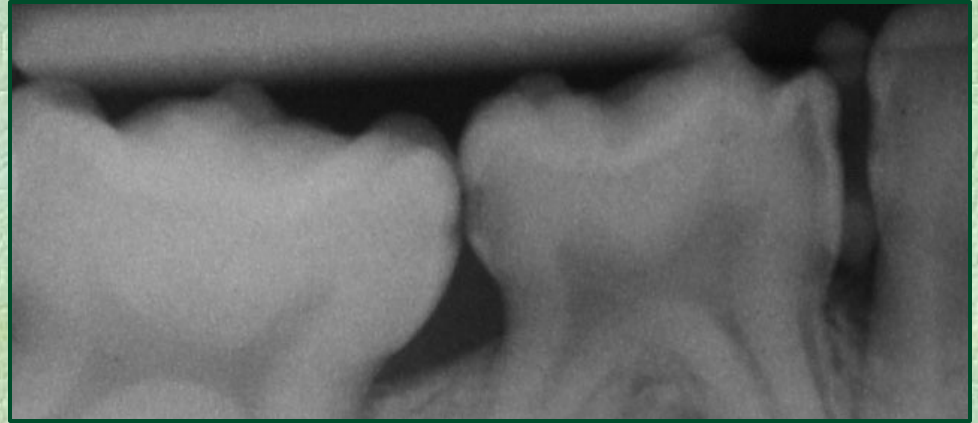
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**D3 (dentin lesion, open/closed)**

D4 (lesion into the pulp)





# Caries Progression



# Stages of the carious lesion

D1 (enamel lesion, no cavity)

D2 (enamel lesion, cavity)

D3 (dentin lesion, open/closed)

**D4 (lesion into the pulp)**





# Early Childhood Caries (ECC)

“The presence of one 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.”



## Severe Early Childhood Caries (S-ECC)

“Any sign of smooth-surface caries in a child younger than 3 years of age”

# Clinical Presentation: Early Lesions ECC

- Begins soon after dental eruption
- Typically develops on smooth surfaces
- If enamel not uniformly white, patient is at risk
- Appear as chalky white decalcification
- Most often starts on lingual surfaces of maxillary incisors



# Early Childhood Caries

## Clinical Presentation

(Advancing)

- Virulent caries with rapid progression
- Enamel chips away as lesions advance
- Colour of caries indicates speed of progression



# Nursing bottle caries



- ◉ Seen in **infant and toddler**
- ◉ Affects primary dentition
- ◉ **Mandibular incisors** are **not** involved

## ETIOLOGY

- Improper bottle feeding
- Pacifier dipped in honey/other sweeteners



# Rampant caries.





## **NURSING CARIES**

- Seen in infant and toddler
- Affects primary dentition
- Mandibular incisors are not involved

## **ETIOLOGY**

- Improper bottle feeding
- Pacifier dipped in honey/other sweetener

## **RAMPANT CARIES**

- Seen in all ages, including adolescence
- Affects primary and permanent dentition
- Mandibular incisors are also affected

## **ETIOLOGY**

- **MULTIFACTORIAL**
  - Frequent snacks
  - Sticky refined CHO
  - Decreased salivary flow

# White Spot Lesion



## White Spot Lesion

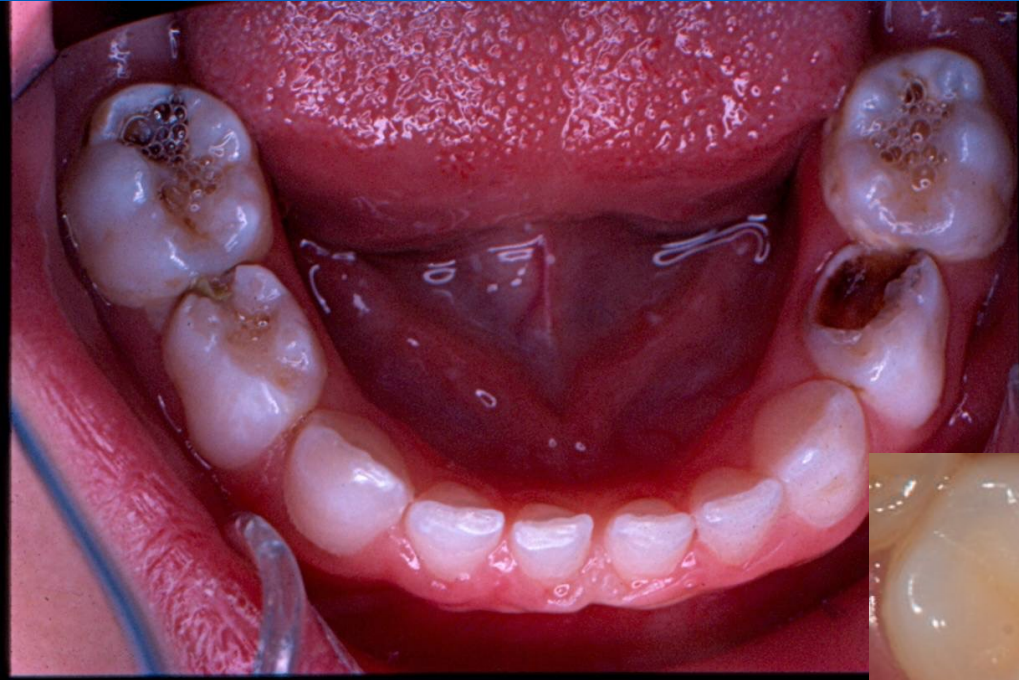
Really a subsurface lesion



Internal  
loss of  
minerals

External  
(outer)  
surface

# Deep caries

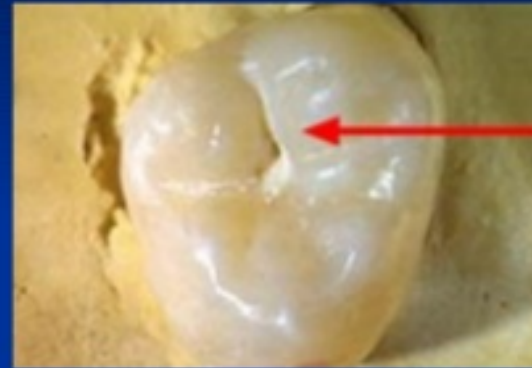


# Pit and Fissure Caries

Non-cavitated carious lesion



Enamel



Enamel



Enamel



Dentin

# Interproximal Caries

**The lesion that is developed in a smooth surface which is in contact with the approximal surface of the adjacent tooth**



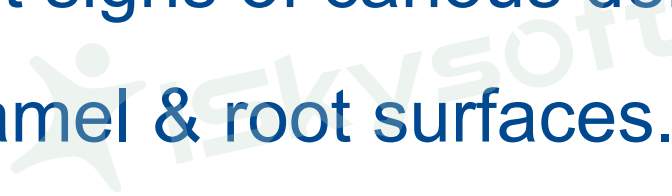
# Orthodontic decalcifications and caries



# Principles of Diagnosis

The goal of examining a patient for the presence of dental caries is to detect the earliest signs of carious demineralization on enamel & root surfaces.

If early signs of demineralization are detected, preventive care may reverse the caries process.



# Diagnosis

## Clinical examination

- The clinical-visual diagnosis
- Meticulous clinical diagnosis
- Clinical / tactile (Use of the probe /explorer)
- Temporary elective tooth separation
- Fiber-optic transillumination (FOTI)
- Magnification
- Laser fluorescence measurement (DIAGNOdent)
- CANARY system
- **Radiographic examination**
- Bitewing radiographs





# Caries-risk assessment

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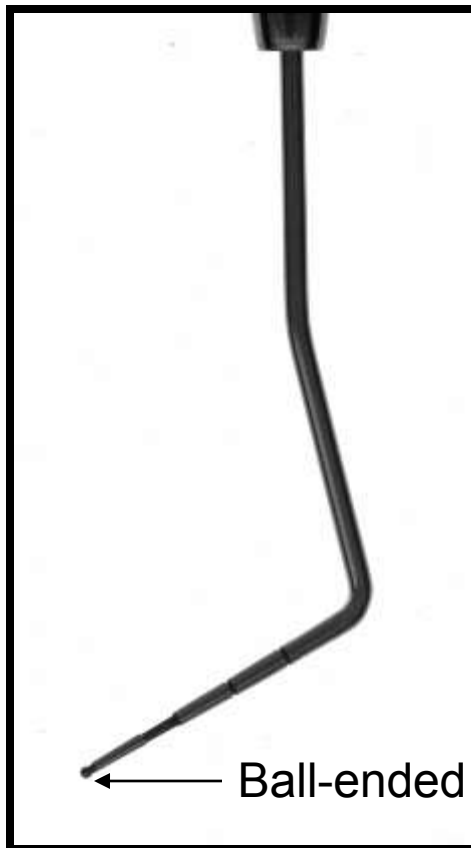
## □ Child's History

- History of dental decay in mother, child and other family members
- Family is of low economic status
- Child consumes a high sugar/complex carbohydrate diet
- Child has special health care needs
- Child was premature/low birth weight
- Child routinely is prescribed medications that are sugar based or that reduce salivary flow

# Use of Explorers (*?contentious*)

In the ICDAS-system perio probes are used to feel with

Explorers are not recommended as they may produce traumatic defects



Ekstrand et al., 1987

# Explorers & Pit & Fissure Caries

“Probing found unreliable in finding fissure caries”



“The reliability of carious lesion diagnosis by sharp explorer compared to diagnosis of carious lesion by histological cross section was 25%.”

“A seemingly intact occlusal enamel surface may conceal an extensive lesion of the dentin”

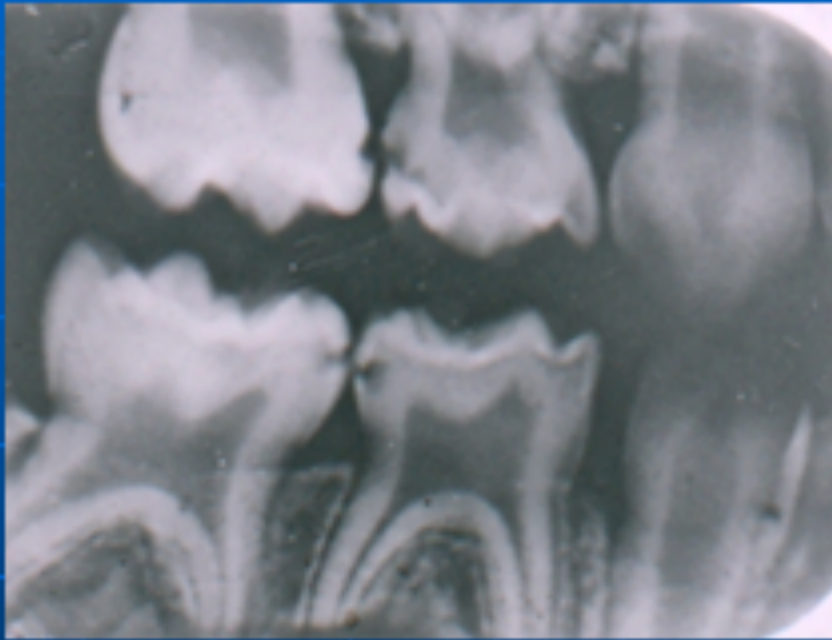


# Radiographic examination

## Advantages

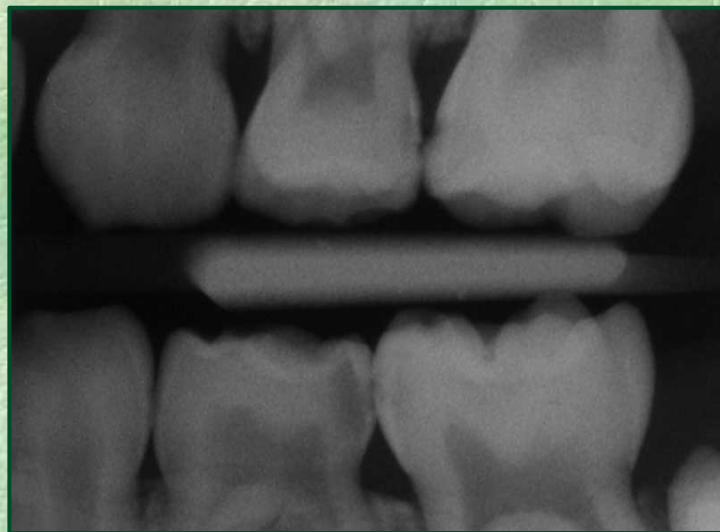
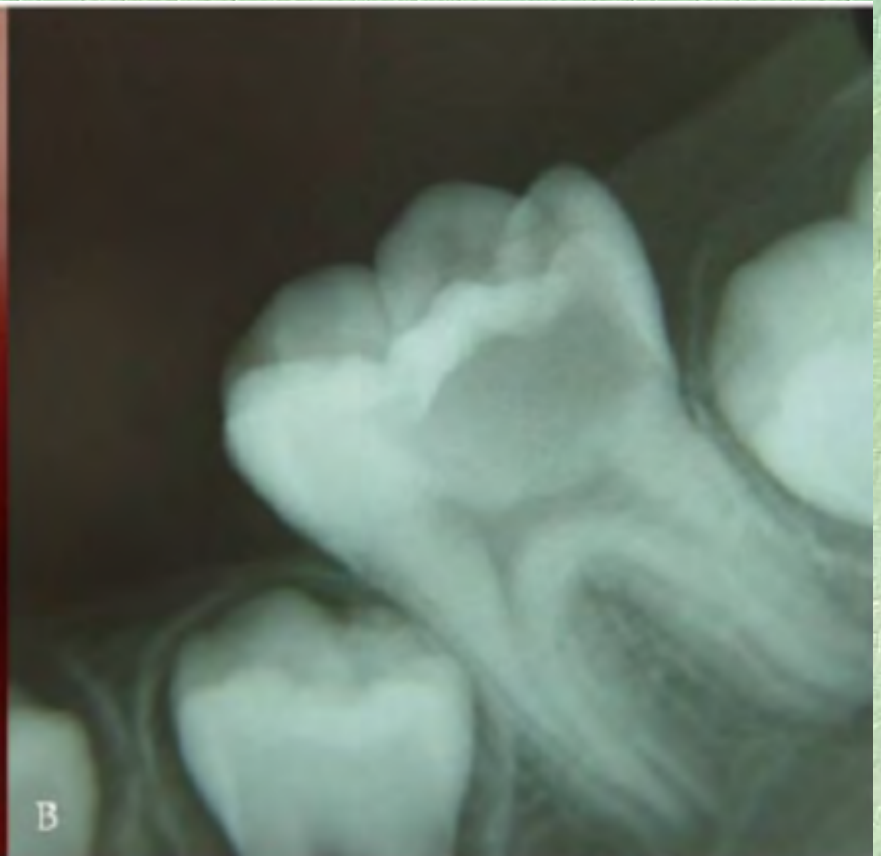
Surfaces that are inaccessible to clinical visual inspection can be studied.





Bite-wing radiographs





# Radiographic classification of the depth of interproximal carious lesions



**R0= no radiolucency**

**R1= radiolucency confined to in the outer half of the enamel**



**R2= radiolucency in the inner half of the enamel including lesions extending up to but not beyond the enamel-dentin junction**

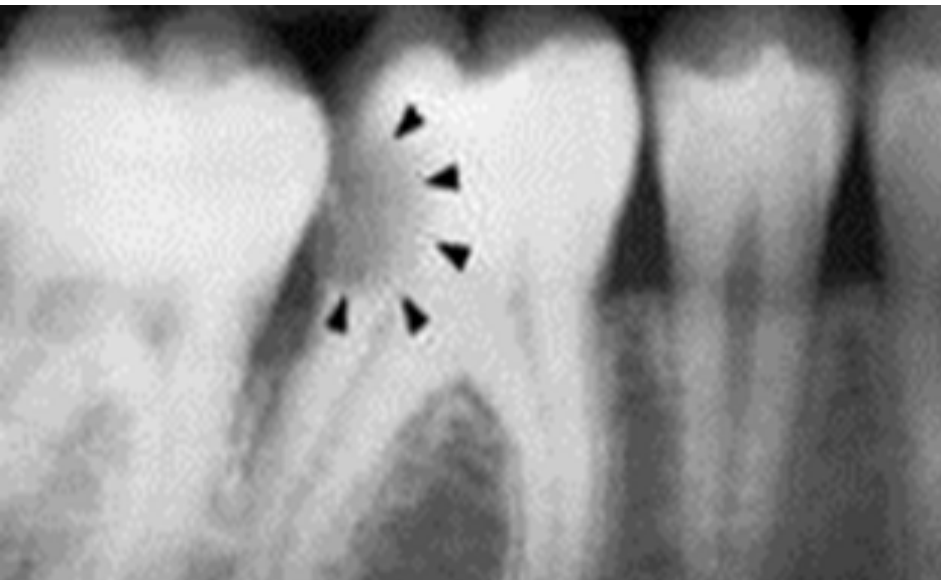


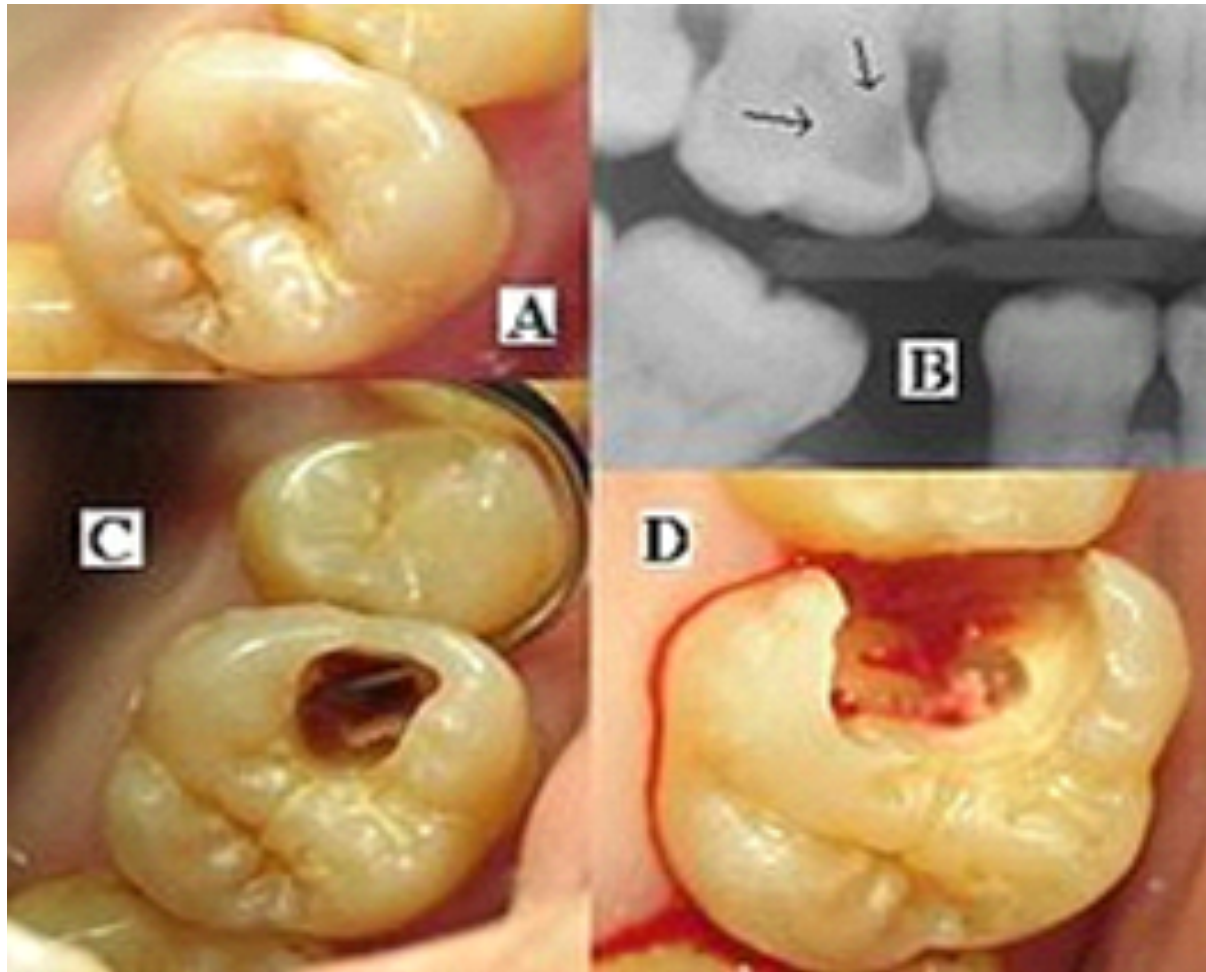
**R3= radiolucency with obvious spread in the outer half of the dentin (< half way through to the pulp)**



**R4= radiolucency with obvious spread in the inner half of the dentin (> half way through to the pulp)**







**(A)** A small spot of decay visible on the surface of a tooth. **(B)** The radiograph reveals an extensive region of demineralization within the dentin (arrows). **(C)** A hole is discovered on the side of the tooth at the beginning of decay removal. **(D)** All decay removed.

**SOUND**

**OPACITY**  
 First Visible Change  
 only after airdrying:  
**WHITE, BROWN**

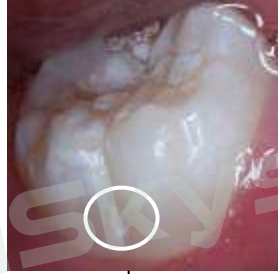
**OPACITY**  
 Distinct Visible Change  
 without air-drying:  
**WHITE, BROWN**

**LOCALISED ENAMEL BREAKDOWN**  
 SURFACE INTEGRITY LOSS

**UNDERLYING DARK SHADOW**  
 +/- SURFACE INTEGRITY LOSS

**DISTINCT CAVITY**  
 WITH VISIBLE DENTINE

**EXTENSIVE DISTINCT CAVITY**  
 WITH VISIBLE DENTINE



**ICDAS II (International Caries Detection & Assessment System) scores**

*Enamel Caries*

*Dentin Caries*

Score 0

Score 1

Score 2

Score 3

Score 4

Score 5

Score 6

# Diagnosis - Current methods

## Clinical examination

- Temporary elective tooth separation



# Solutions for Caries Control



# Remineralization and Other Therapies



Minimally Invasive Dentistry

# Initial Management follows Risk Assessment

## CAMBRA=Caries Management by Risk Assessment THE NEW STANDARD OF CARE

- Assess child and caregiver caries risk in an individualized manner
- Tailor a specific preventive therapeutic management plan
- Customize a restorative plan in conjunction with the preventive plan
- Plan timely, specific and appropriate periodicity schedule based on the child's caries risk

Ramos-Gomez F, Ng WM, Oct 2011

# Understanding your choices?



NOVAMIN



ProArgin



# Product Decisions?

- Fluoride
- CPP-ACP (Recaldent)
- NovaMin
- ProArgin
- Xylitol products
- Antibacterial rinses
- Salivary products
- Neutralizing agents
- Silver Diamine Fluoride
- Povidone Iodine
- CHX varnish (Prevora)
- Sealants
- ICON

- **RISK** Demand?
- Age and Ability?
- Buffering?
- Fluoride Uptake?
- Contact time needed?
- Desensitization?
- Antibacterial Activity?
- Salivary Stimulant?
- Compliance?

# Topical Fluoride

## The Original Remineralization Agent

- Water Fluoridation
- Toothpaste
- Fluoride Rinse
- Fluoride Varnish
- Bottled Water

# Office + Home Therapy

## Office

- **Topical Fluoride (gels and foams)**
- **Fluoride Varnish**
- **Anti-Microbial Therapy**
  - Prevora
  - Cervitec
- **Oral Hygiene & Patient Motivation**
- **Diet Counselling**
- **Ongoing Monitoring**

+

## Home

### Toothpastes & Topical Application

- Clinpro 5000 Toothpaste
- ProArgin in Colgate
- MI Paste
- Prevident

### Sugar Substitutes

- Xylitol
- Novamin

### Mouthwashes

- Peridex
- Tricolsan Products

### Gums & Mints

- Recaldent
- Xylitol

Effective Plaque Removal with Brushing & Flossing

# Agents for Control of Biofilm

Vast majority of agents for control of biofilm are broad spectrum non-specific microbiocide agents:

- CHX
- Triclosan
- Essential Oils (Listerine)
- Povidone Iodine



# Decay Potential of Certain Foods

## High Potential for Decay

- Dried fruits
- Candy, hard candy
- Cake, cookies, pie
- Crackers
- Chips

## Moderate Potential for Decay

- Fruit juice
- Sweetened, canned fruit
- Soft drinks
- Breads

## Low Potential for Decay

- Raw vegetables
- Raw fruits
- Milk

## No Potential to Decay

- Meat, fish, poultry
- Fats, oils

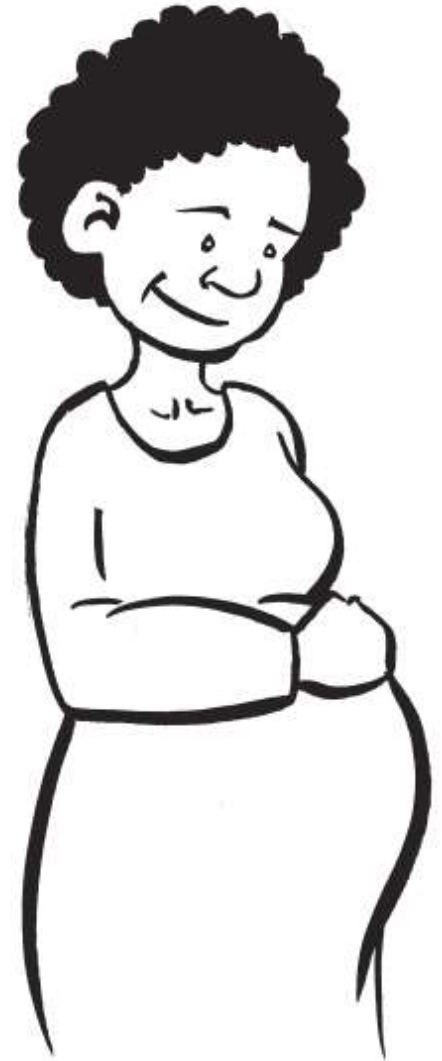
## Ability to Stop Decay

- Cheeses,
- Xylitol
- Nuts

# Anticipatory Guidance for Mother

## Goal:

Anticipatory guidance for the mother both before the baby is born and following the infant's birth on several information items:



# First Teeth First Visit: Why Bother

- Early intervention maintains child's oral health
  - Delegation of a series of procedures to other staff
  - Good practice builder
    - Build strong long lasting relationships with the family
    - Develops good referral base
- The key is to assess risk, motivate parent / caregiver to provide proper care with appropriate in-office care.



# Elements:

- Parent / Guardian interview
- Visual exam to assess risk
- Assess / facilitate parental motivation
- Oral Hygiene Instruction
- Develop a preventive protocol
- Apply or dispense preventive therapies

The key is to establish an effective collaboration.





# Does Remineralization Work?

Yes

But

You need to monitor and motivate  
your patient



# Remineralization + Monitoring

Essential components of any program:

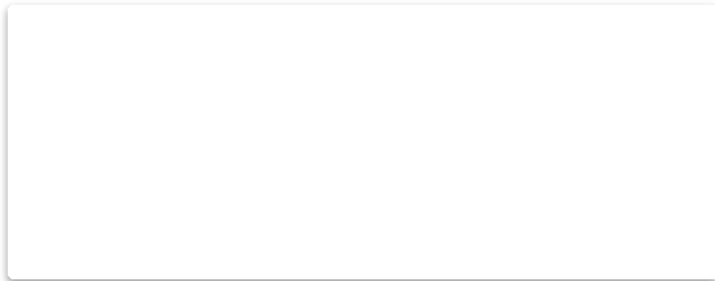
- Need to monitor progress
- Need to record progress
- Need to be able to change therapy if lesions increase in size
- Need to engage your patient

Bottom Line: **Case Selection**

# Newly Erupting Permanent Molar

Options:

- Resin sealant
- Glass Ionomer sealant
- CHX varnish followed by Sealant once erupted



## Pit and fissure sealants

**When active fissure caries has been diagnosed or if a high risk has been established and fissures have susceptible morphologic characteristics, sealants with a low filled resin is indicated**



# Glass Ionomer Sealant

- Moisture friendly
- Fluoride-release potential
- Does not have steps resin-based sealants require
  - No acid etching or the application of a primer
  - No bonding age



**BUT**

- It is temporary until the tooth is fully erupted

# Solutions for Caries Control

## Filled Resin Sealant



# Take-Home Message on Primary Molars

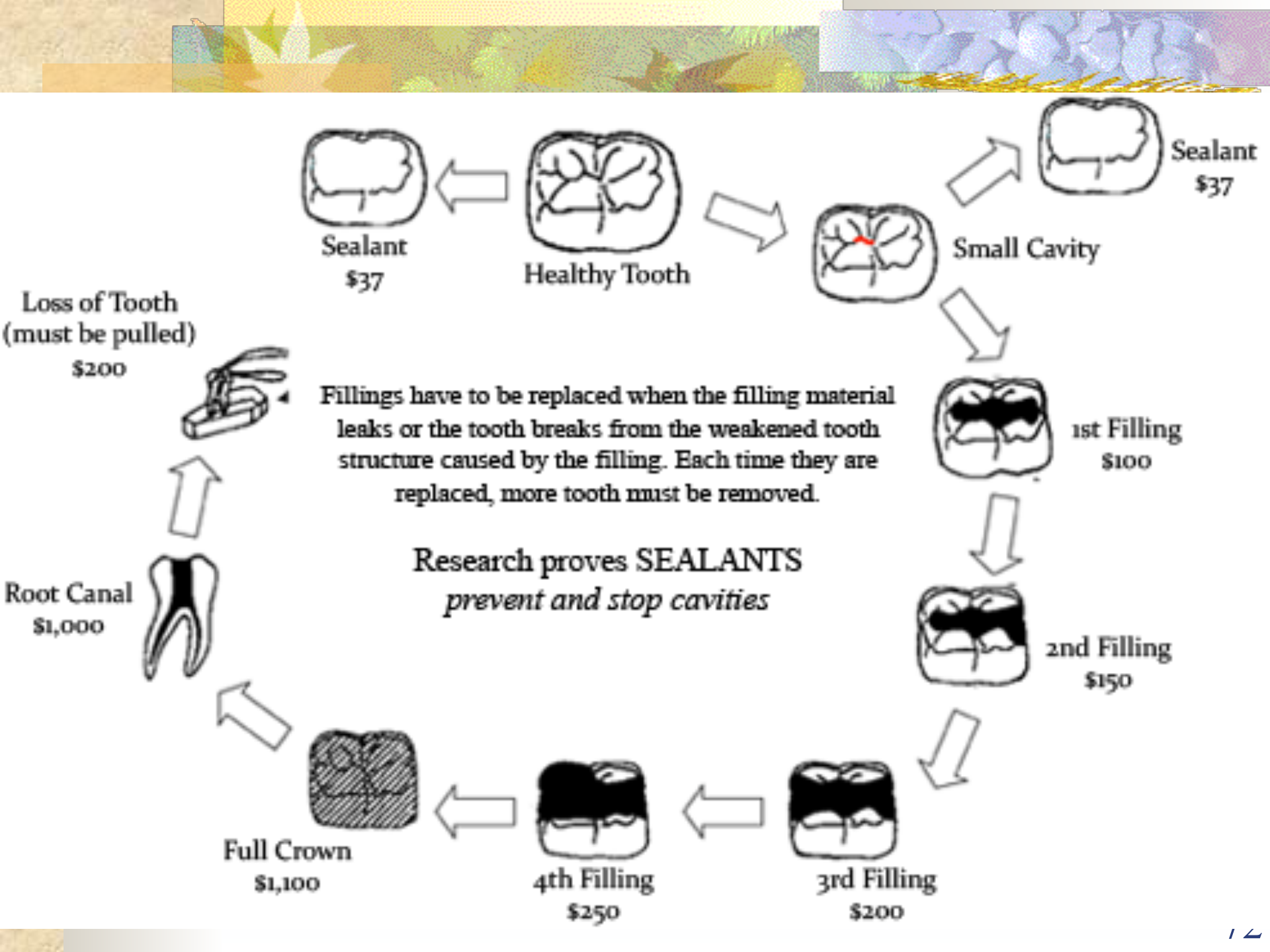
## When sealants on primary molars

- Only when risk of **occlusal caries** is high
- Second primary molars before first primary molars

## Consider

- Preventive Resin Restoration for high risk patient





Sealant  
\$37



Healthy Tooth



Small Cavity



Sealant  
\$37



1st Filling  
\$100



2nd Filling  
\$150



3rd Filling  
\$200



4th Filling  
\$250



Full Crown  
\$1,100



Root Canal  
\$1,000

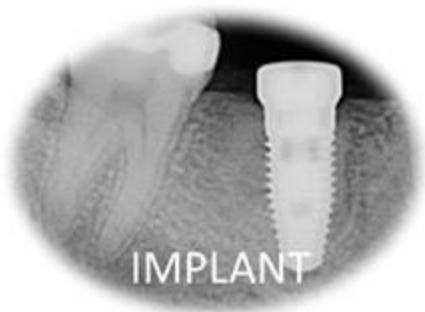


Loss of Tooth  
(must be pulled)  
\$200

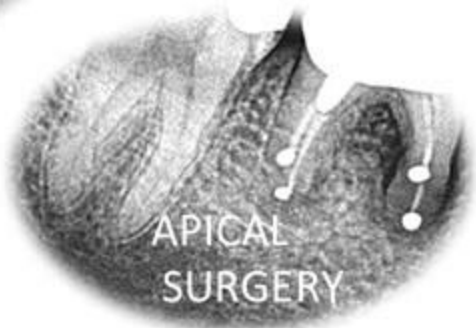
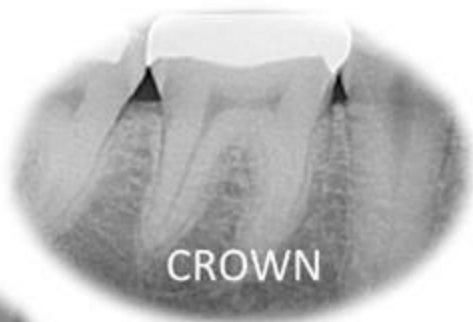
Fillings have to be replaced when the filling material leaks or the tooth breaks from the weakened tooth structure caused by the filling. Each time they are replaced, more tooth must be removed.

Research proves SEALANTS prevent and stop cavities





## THE MONEY TOOTH



# Are Parents / Patients Interested?

- Why do I get cavities?
- I brush and floss doesn't that prevent any cavities?
- I brush my child's teeth before bed like you showed us and in the morning now look at what happened?
- My child eats no sweets yet we still have cavities?
- **What can I do as a parent to prevent cavities?**



# Patient Messages

- Caries is a Disease
- Caries, if detected early can be treated with a wide range of therapies
- Caries can be prevented
- Treatment needs to be home and office based
- Fillings, root canals are really later stage treatments



# Self-Management Goals for Parent/Caregiver

Patient Name \_\_\_\_\_

DOB \_\_\_\_\_



Regular dental visits for child



Family receives dental treatment



Healthy snacks



Brush with fluoride toothpaste at least 2 times daily



No soda



Less or no juice



Wean off bottle (no bottles for sleeping)



Only water or milk in sippy cups



Drink tap water



Less or no junk food and candy



Use xylitol spray, gel or dissolving tablets

**IMPORTANT: The last thing that touches your child's teeth before bedtime is the toothbrush with fluoride toothpaste.**

Self-management goals 1) \_\_\_\_\_

2) \_\_\_\_\_

On a scale of 1-10, how confident are you that you can accomplish the goals? 1 2 3 4 5 6 7 8 9 10

Signature \_\_\_\_\_ Date \_\_\_\_\_

Practitioner signature \_\_\_\_\_ Date \_\_\_\_\_

# Office Integration

## Introducing this to patients

### **New Patient**

Exam

Risk Assessment

Treatment

### **Recare**

Recall

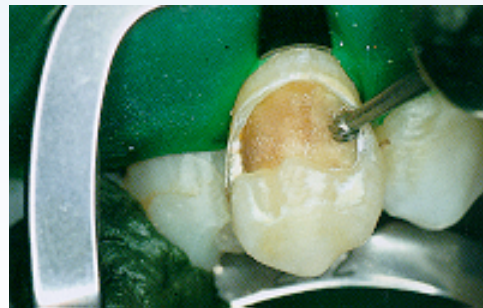
Risk Assessment

Treatment




Traditional caries management has consisted of detection of caries lesion followed by immediate restoration. **In other words**, caries was managed primarily by restorative dentistry.

**However**, when the dentist takes the bur in hand, an irreversible process begins. Because this is the start of a restoration cycle in which the restoration will be replaced several times.



# The Value of Early Detection

- 
- A vertical strip on the left side of the slide features silhouettes of children of various ages, from a toddler to a young adult, set against a dark purple background.
1. Is the ability to control the disease process in order
  1. To contain, arrest or remineralize lesions, in order
  2. To avoid or delay the burdens or costs associated with a spiral of restoration and re-restoration

**If a lesion is left to extend until a filling is needed, the clinical opportunity for effective prevention is lost**

# Case Scenario-“Incipient” Interproximal Caries

## Treatment Options: What does that mean NOW

- Monitor
- Review and/or alter preventive care
  - *Flouride varnish, Povidone Iodine, home care including high fluoride T.P., diet review*
- More frequent office preventive visits
- Glass Ionomer sealant
- Vanish XT Extended Contact Varnish
- ICON
- Restoration



# ICON Resin Infiltration



**Icon<sup>®</sup>**  
Caries Infiltrant - Proximal



Intermediate treatment

Neither preventive nor restorative

Resin infiltrant into pre-cavitated carious lesion

# ICON Resin Infiltrant



# ICON Resin Infiltrant



English

pro-inva-  
roximal

respec-

y devel-  
ment of  
atented

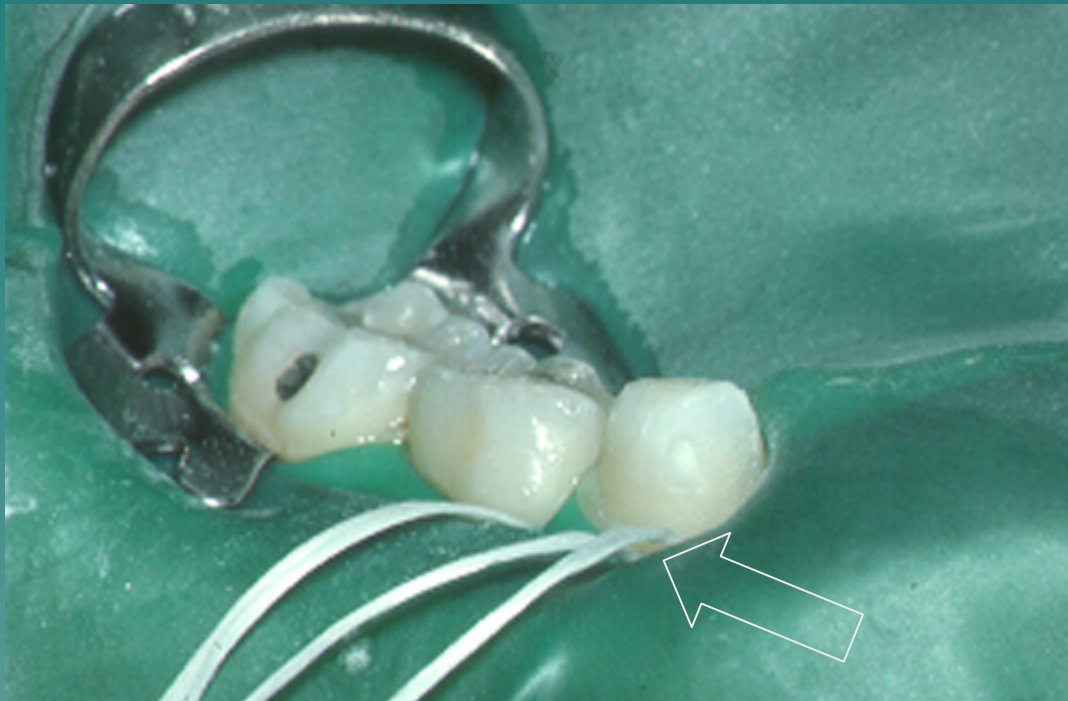
## Lesion depth classification\*

The diagram illustrates five teeth from left to right, each with a black shaded area representing a lesion. The first tooth has a small lesion on the enamel surface (E1). The second tooth has a lesion extending slightly into the enamel (E2). The third tooth has a lesion extending into the dentin (D1). The fourth tooth has a lesion extending deeper into the dentin (D2). The fifth tooth has a lesion extending to the pulp chamber (D3).

\* Radiographic lesion depth classification according to bite-wing x-rays.

## RECOMMENDED USE

**Treat as many teeth as you can  
with the anesthesia and rubberdam**



**If** restoration is required which restorative material to use??

1. Amalgam
2. Composite resin
3. Glass ionomer cement
4. Compomer/RM-GIC
4. Stainless steel crown
5. Strip crown
6. Veener/cromn

## Amalgam

Used in posterior teeth where its strength, abrasion resistance, and ability to retain a good polish make it a popular material



## Composite resin

Tooth-colored esthetic restorative material used for anterior teeth where appearance is most important . Also, some are designed to be used in posterior teeth where strength and abrasion resistance are of prime importance.



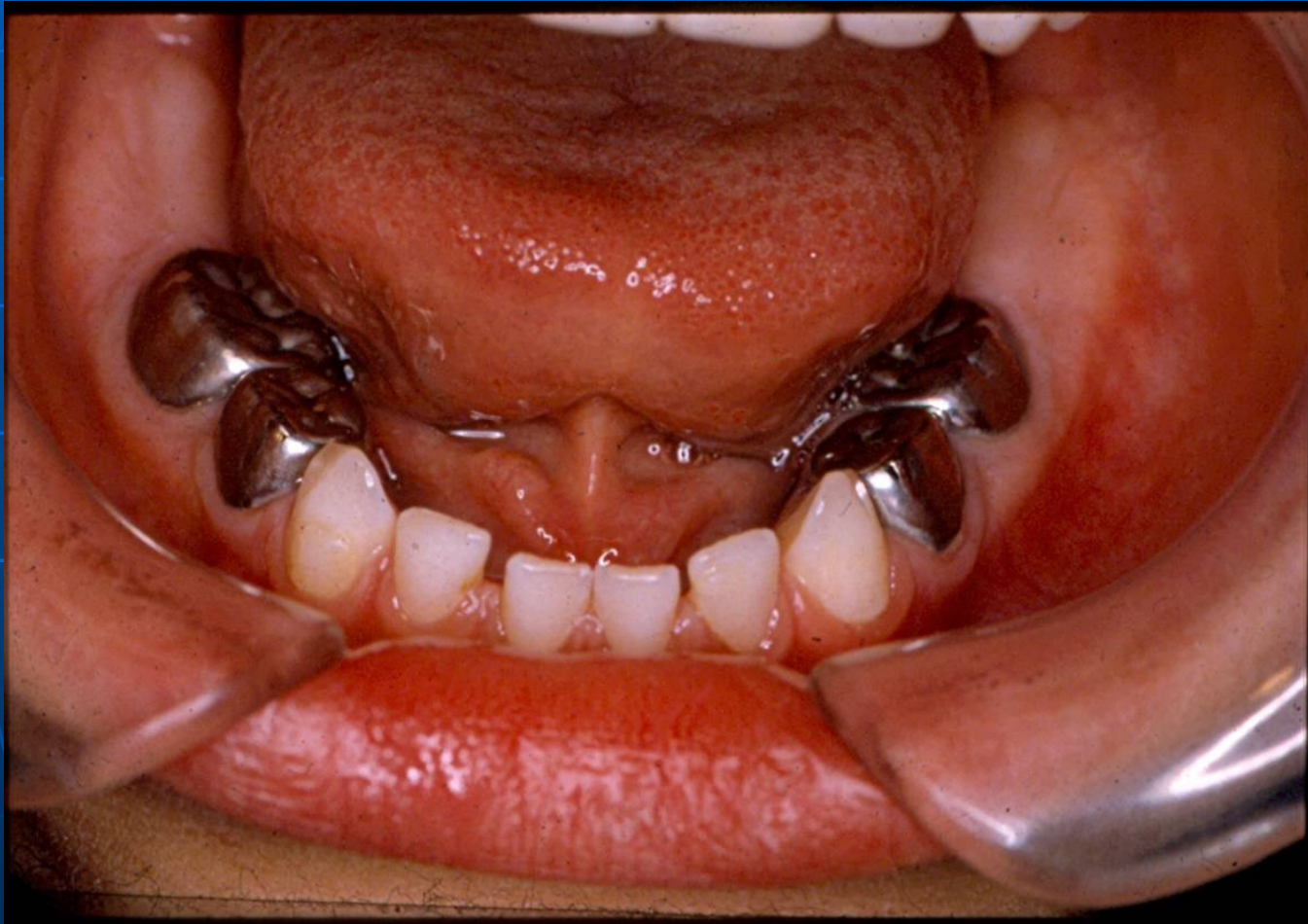
## Glass ionomer cement

Are not commonly used when esthetic is a major consideration in anterior teeth. It is recommended for patients with high caries rates because they release fluoride.

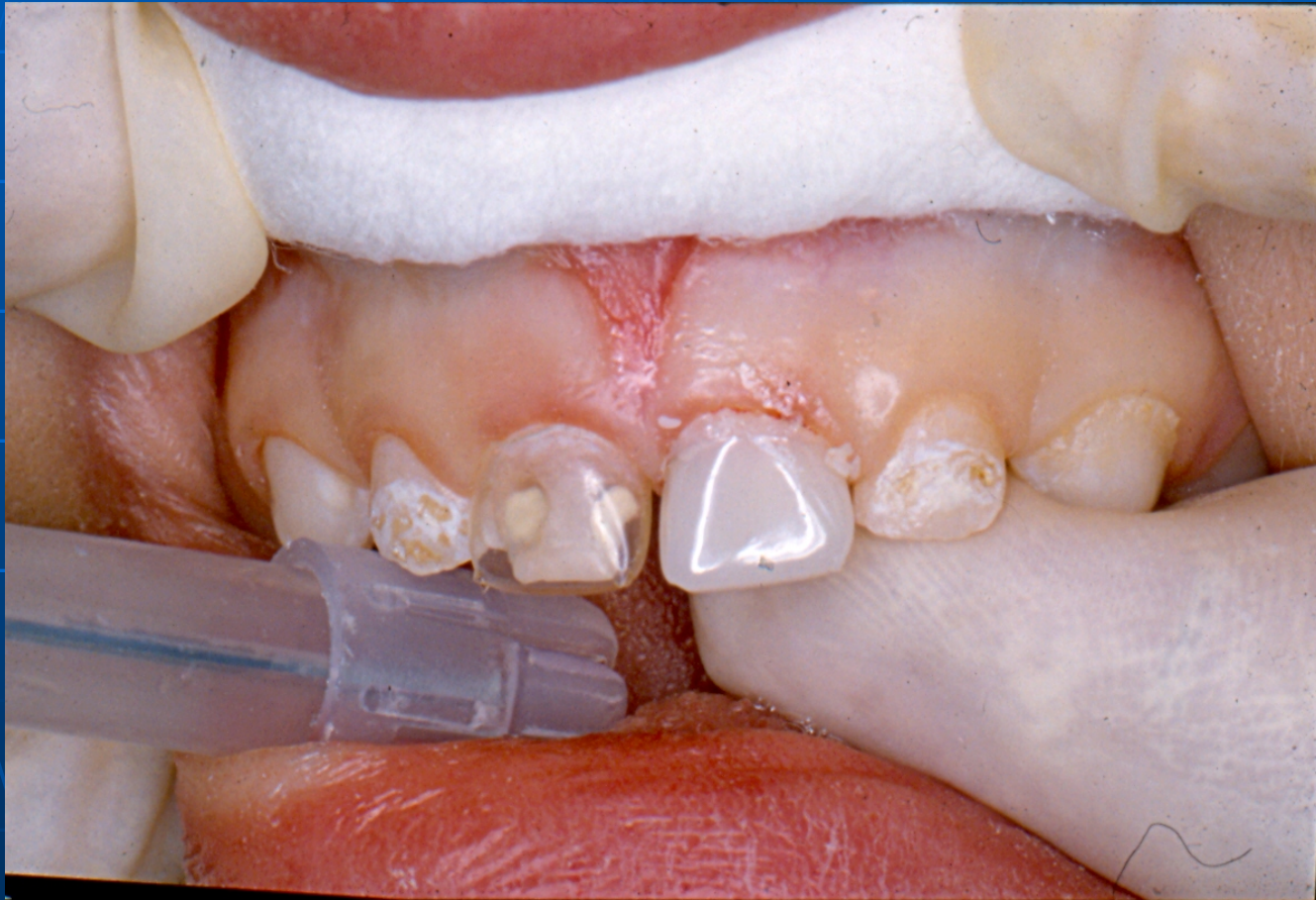




# Restorative Treatment

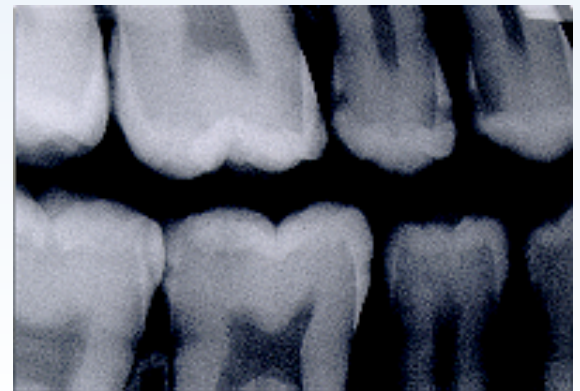


# Restorative Treatment



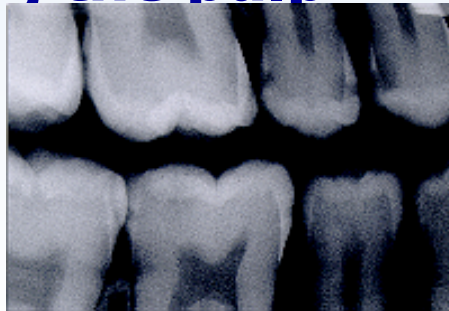
## Caries in pits and fissures

- **Since it is difficult to diagnose in its early stages and fissures are susceptible sites, the dentist may decide to fissure seal susceptible teeth as soon after eruption as possible**
- **The occlusal lesion which shows on a bite-wing radiographs should be restored. These lesions are larger than they appear on radiographs and rate of their progression may be rapid.**



## Approximal lesions

- **These develop more slowly taking 3-4 years**
- **Early enamel lesion seen in a bite-wing radiograph should be given a chance to become arrested by applying preventive measures**
- **Once caries is visible in dentin on a bite-wing, enamel is likely to be cavitated, therefore, operative procedure is indicated. The aim of treatment is to remove bacterial infection and to restore the integrity of the tooth surface, thus protecting the pulp**



## Preventive resin restoration

**If additional preparation is needed to the pits and fissures other than opening of the fissure, posterior resin composite is placed in that area and remaining fissures and surface of resin composite restoration is sealed with sealant material**



# Atraumatic Restorative Treatment (ART) (and ITR)

## Features

- useful alternative to composite resin and Amalgam restorations
- usually compomer material
- faster treatment at less expense
- can be a psychologically desensitizing procedure
- usually done without local anesthesia
- semi-permanent restoration on primary dentition
- can be bonded with or without acid-etch
- longevity 2 years +



# Interim Therapeutic Restorations

## A Variant of A.R.T.

- Advantages
  - *Temporization restoration*
  - *Fluoride-releasing*
  - *Minimal/no preparation*
  - *Opportunity to “buy time”*
- Materials
  - *Resin-modified glass ionomer or*
  - *Glass ionomer*
  - *CaOH or GI base as necessary*




# Restorations

- Restorations have no measurable effect on bacteria.
- Restorations have a finite life span.
- Each replacement restoration leaves less tooth structure.
- Restorations increase the risk of an abscess.
- Restorations may increase the risk of tooth fracture & periodontal disease.



# The Paradigm Shift



**One can place a number of restorations in a mouth and yet not treat the underlying disease. The bacteria remain in the plaque biofilm on the remainder of the teeth capable of creating new areas of decalcification and cavitation.**

**We need to shift from a surgical approach to a disease management & preventive approach.**

# BECAUSE FILLINGS

Don't treat underlying disease

Don't address plaque biofilm issues

Don't change risk level

SHIFT

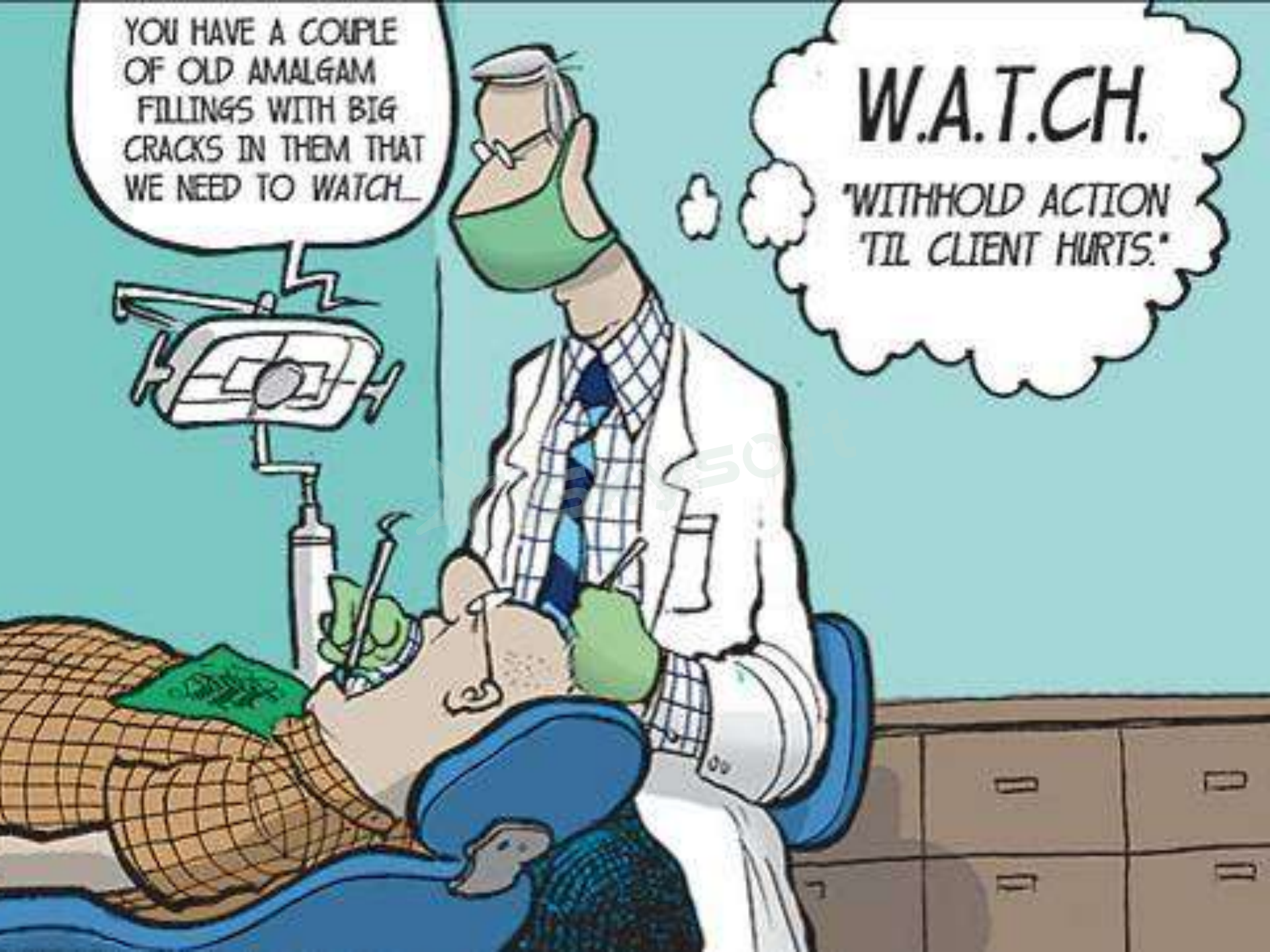
We need to **SHIFT** from a surgical approach to a RISK management & preventive approach.



YOU HAVE A COUPLE  
OF OLD AMALGAM  
FILLINGS WITH BIG  
CRACKS IN THEM THAT  
WE NEED TO WATCH.

**W.A.T.C.H.**

"WITHHOLD ACTION  
'TIL CLIENT HURTS."





**Before restoration a group of certain questions has to be asked**

- **Is the caries present**
- **If so how far does it extend**
- **Is the restoration required or could the process be arrested by preventive treatment?**


**The modern dentistry and with the introduction of adhesive dentistry, the dentists are allowed to make smaller preparations. Which have led to preservation of hard dental tissues. This allowed elimination of G.V Black's principles.**




**The treatment goal** in caries management should be:

- To prevent new lesions from forming
- To detect lesions sufficiently early in process that they can be treated and arrested by non operative means.

**If these attempts have failed,** restorations will be required to restore the integrity of the tooth surface

- 
- **The activity of caries should be determined and causative factors should be evaluated**
  - **Caries risk should be assessed before treatment is considered**
  - **Treatment should include preventive regimens to arrest the caries process**



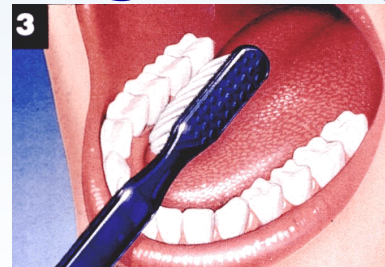
**If** the patient is found to have active caries and the dentist immediately and skillfully restore the teeth is the patient still at risk????

**The answer is yes** unless the biological environment that caused the caries to occur has been changed. Caries risk factors has to be determined and the patient should be made aware of his or her caries risk status to encourage them to become involved in his or her own preventive care

**If** the lesion is active

The general approach to active caries should be **preventive treatment**

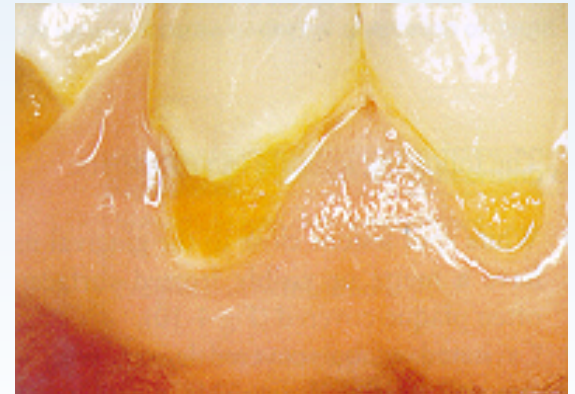
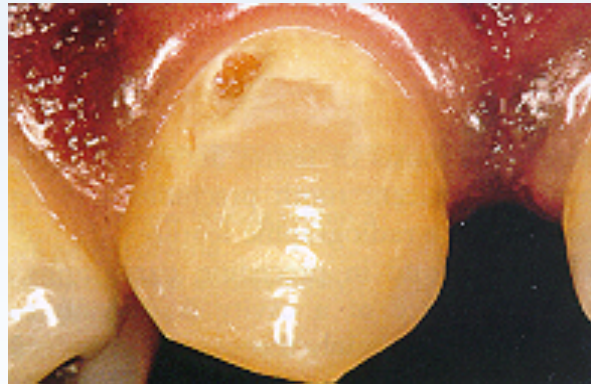
- Reduce sugar consumption/ reduce frequent consumption by confining sugar to meal time. Use sugar substitutes
- Plaque control: brushing twice daily with effective fluoride tooth paste. Use dental floss
- Application of topical fluoride gels, solutions, and varnishes.
- Stimulate saliva by use of sugar free gums such as Xylitol chewing gums





## Caries on exposed smooth surfaces

- **Operative intervention is not required prior to cavitation**
- **Even cavitated lesions can be arrested**
- **Lesions which are plaque traps or deep should be restored**



## Root caries

- **It is possible to re-harden root caries by preventive measure, although as the lesion become arrested, a brownish black discoloration cannot be avoided**
- **Root caries should be restored where it endanger the pulp, where cavitation is encouraging plaque stagnation, or if sensitivity or appearance are problems**





## **Indication for restorative treatment**

- 1. The tooth is sensitive to hot, cold or sweet.....**
- 2. Occlusal and proximal lesions extend into dentin**
- 3. The pulp is endangered**
- 4. Previous attempts to arrest the lesion have failed and the lesion is progressing**
- 5. The pt. Ability to provide effective home care is impaired**
- 6. Drifting might occur due to loss of proximal contact**
- 7. Esthetic reasons**

# Orthodontic Decalcifications and Caries

## Strategies and Solutions

### Objectives of Orthodontics

Esthetics

Function

Stability

### Conclusion

Decalcification and Caries are a failure of orthodontic outcomes



iskysoft

# Strategy For Caries Control

- Risk Assessment
- Collaboration Triad
- Communication Agreement
- Individualized Prevention Programme



RiskyBott

# EAPD and AAPD Policy for ECC prevention

- Maternal dental care to decrease the transmission of cariogenic bacteria
- Infants should not sleep with a bottle
- Ad libitum nocturnal breast feeding should be avoided after the first primary tooth eruption
- Avoidance of repetitive consumption of liquid fermentable carbohydrates
- Visit to the dentist within 6 months of the first tooth eruption and no later than 12 months
- Oral hygiene by the time of the first tooth eruption with fluoridated toothpaste
- Professional fluoride varnish application

# ECC restorative treatment

Follow up visits every 3 months for the first year post treatment

Quality of restorations

Oral hygiene

Dietary habits

Professional tooth cleaning and topical fluoride application

Mother's oral health care