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How I Implement Caries Risk Assessment In My Practice

- What
- When
- How
- Use of Data
- Differences in my practice

Professional Disclosure

- **CaMBRA LLC**



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What

**Caries Management By Risk Assessment
CaMBRA**

Caries Risk Assessment 2006

Risk is defined as the probability that some event will occur. Caries risk assessment is the probability of whether new cavitations will develop.

When

- At Very Beginning Of Appointment
 - NPE
 - Once A Year

How

- Traditional Culture using Caricature
- Bioluminescent Test Using Ultra-snaps
- Questionnaire



















CariCult™



CariCult Incubator





Component A: Screening Test

- ATP Bioluminescence
- Non-specific bacterial and somatic ATP test
- Correlation between non-specific ATP levels and bacterial cultures
- Real time (15 seconds) inexpensive test for identifying high risk from low risk individuals



"A key to survival of *S. mutans* at low pH is its ability to maintain a transmembrane pH gradient with the interior of the cell more alkaline. This results in an increased use of ATP for H⁺ extrusion and a consequent reduction in cell yield."

**Alice CL Len, Harty DWS, Jaques AJ.
Stress-responsive proteins are upregulated in *Streptococcus mutans* during acid tolerance. *Microbiol 150* (2004) 1339-1351.**

ATP Bioluminescence

ATP + luciferin + O₂

Mg⁺²

luciferase



AMP + oxyluciferin + P_Pi + CO₂ + Light (560 nm)













PROG 0

30 ↑

193

10 ↓

systemSURE II



OK



P

:

PROG 0

30 ↑

194

10 ↓

RLU

0

systemSURE II

Component B: Caries Risk Assessment Form

- Fill it in as specified
- Highest risk indicator is existing lesion
- Does not confirm diagnosis, but identifies specific risks
- Assign Risk to patient

CaMBRA
The COMPLETE Caries Solution

CARIES RISK ASSESSMENT FORM – ADULTS/CHILDREN AGED 6 AND OVER

Patient Name: _____ Age: _____

Instructions: Circle the answers that apply

FACTORS	HIGH	MODERATE	LOW
1. Local Factors			
Plaque/Calculus	generalized	localized	minimal/none
2. Dental Conditions			
*Visible cavitations	yes		no
Cavity in last 3 years	yes		no
Inadequate saliva flow	yes		no
Exposed roots		yes	no
Deep pits/fissure		yes	no
Radiographic lesions		yes	no
White spot lesions		yes	no
Appliances present	yes		no
3. Medical History			
GERD	yes		no
Sjogren's syndrome	yes		no
Hyposalivary meds	yes		no
Radiation Therapy	yes		no
4. Dietary Habits			
Snacks between meals	>3 times	1-3 times	infrequent
Regular Soda	yes	infrequent	no
5. Environmental			
Recreational drugs	yes		no
6. Protective Factors			
Fluoridated water	no		yes
Fluoridated toothpaste	no		yes
Adequate saliva flow	no		yes
Fluoride mouthrinse		no	yes
Xylitol gum/mints		no	yes
CariStat rinse		no	yes
Other Rx rinse		no	yes
7. Laboratory Tests			
CariScreen	recommended	results	
CariCult	recommended	results	

*If visible cavitation is present CariCult test is recommended

CARIES RISK ASSESSMENT	HIGH	MODERATE	LOW
PROGNOSIS	POOR	MODERATE	GOOD

Use of data

- Let patient know
 - Smooth surface Cavitation is the sign of an infection
 - Nail in tire
 - Repair the tire all you want
 - What would you like to do
 - Keep repairing the tire (it will wear out)
 - Sweep driveway
- Do you have signs of an infection or are you under control?
- Assess risk of failure
- Motivate patient

Differences in my practice

- The way into motivation
- Helps me to steer the patient in the right direction
- How long is this going to last me?
- Cuts down on early failures



THANK YOU

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