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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**



B C NELSON DDS



**OPEN**  
Put a little Squirt in your life.

**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**  
Tissue Culture Media (Serafree)  
100-31  
MAY06  
Puritan Medical Products Company, LLC • Andover, NJ 07826

100  
90  
80  
70  
60  
50  
40  
30  
20  
10  
0

Antibiotic  
Eluent

100  
90  
80  
70  
60  
50  
40  
30  
20  
10  
0

**Puro-Wraps**  
STERILE POLYESTER TIPPED APPLICATOR  
REF 25-806 1PD  
1 807 876-3311  
1 800 351-2318  
Puritan Medical Products Company, LLC  
Gulford, MA 01802, U.S.A.

STERILE UNLESS ENVELOPE IS DAMAGED OR OPEN  
ESTÉRIL EXCEPTO SI EL BOLSILLO ESTÁ DAÑADO O ABIERTO  
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STERILE UNLESS ENVELOPE IS DAMAGED OR OPEN  
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CE  
CONFORME  
STERILE  
ISO

CE  
CONFORME  
STERILE  
ISO



















# 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<sup>+</sup> 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 + O<sub>2</sub>

Mg<sup>+2</sup>

luciferase



AMP + oxyluciferin + P<sub>P</sub>i + CO<sub>2</sub> + 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
<b>1. Local Factors</b>			
Plaque/Calculus	generalized	localized	minimal/none
<b>2. Dental Conditions</b>			
*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
<b>3. Medical History</b>			
GERD	yes		no
Sjogren's syndrome	yes		no
Hyposalivary meds	yes		no
Radiation Therapy	yes		no
<b>4. Dietary Habits</b>			
Snacks between meals	>3 times	1-3 times	infrequent
Regular Soda	yes	infrequent	no
<b>5. Environmental</b>			
Recreational drugs	yes		no
<b>6. Protective Factors</b>			
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
<b>7. Laboratory Tests</b>			
CariScreen	recommended	results	
CariCult	recommended	results	

\*If visible cavitation is present CariCult test is recommended

<b>CARIES RISK ASSESSMENT</b>	<b>HIGH</b>	<b>MODERATE</b>	<b>LOW</b>
<b>PROGNOSIS</b>	<b>POOR</b>	<b>MODERATE</b>	<b>GOOD</b>

# 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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