

CARIES RISK ASSESSMENT FORM - **ADULTS/CHILDREN AGED 6 YEARS AND OVER**

Patient Name: _____ Chart # _____ Age _____
 Assessment date: _____ Is this: (please circle) Baseline or Recall

FACTORS	HIGH	MODERATE	LOW
1. Local Factors	(Please circle responses)		
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/fissures		yes	no
Radiographic lesions		yes	no
White spot lesions		yes	no
Appliances present	yes		no
3. Medical History:			
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
Chlorhexidine rinse		no	yes
Povidone Iodine rinse		no	yes
7. Laboratory Tests			
Saliva Flow	Recommended	Recommended	Optional
Bacterial Culture	Recommended	Recommended	Optional
Lab Test Results: MS: _____ LB: _____ Flow Rate: _____ ml/min.			



CARIES RISK ASSESSMENT: HIGH MODERATE LOW
 PROGNOSIS: POOR MODERATE GOOD

I have been given the recommendation to have a CRT to determine my bacterial counts as a part of my overall caries risk assessment. I understand the risks and benefits of the test and I decline, releasing my dentist(s) of any liability associated with declining the test.

Release signature _____ Date _____

* If visible cavitation present CRT test and saliva flow rate measurement are recommended

+If saliva flow appears inadequate Saliva Flow test is recommended. If rate <1 ml/min follow protocol for xerostomia

Instructions for Caries Risk Assessment Form – **ADULTS/CHILDREN AGED 6 YEARS AND OVER**

1. If the answer is yes to “**visible cavitations**” or if the majority of responses are in the high or moderate columns, then a bacterial test and saliva flow rate test should be given using the **CRT bacteria test*** (Vivadent) – see below.
2. Determine overall caries risk level (high, moderate, or low) based on the balance of circled responses in each of the three risk columns. Prognosis is determined by assessing the patient’s risk factors, motivation, and, whenever possible, the CRT bacteria test results.
3. Provide the patient with recommendations based on your clinical observations and the responses to the questions and discuss strategies for caries control and management. Give the patient the sheet that explains how caries happens and the sheet with your recommendations. Copy the recommendations for the patient chart.
4. Inform the patient of the results of any test results. Showing the patient the bacteria grown from their mouth (CRT test result*) can be a good motivator so have the culture tube handy at the next visit (or schedule one for this purpose - the culture keeps satisfactorily for some weeks), or give/send them a picture.
5. After the patient has been following your recommendations for 1-6 months, have the patient back to re-assess how well they are doing. Ask them if they are following your instructions – how often. If the bacterial levels were moderate or high initially, repeat the bacterial test to see if bacterial levels have been reduced. Make changes in your recommendations or reinforce protocol if results are not as good as desired or the patient is not compliant.

***Test procedures – Saliva Flow Rate and Caries Bacteria Testing**

+*1. Saliva Flow Rate: Have the patient chew a paraffin pellet (included with the CRT test – see below) for 3-5 minutes (timed) and spit all saliva generated into a cup. At the end of the 3-5 minutes measure the amount of saliva (in milliliters) and divide that amount by time to determine the ml/minute of stimulated salivary flow. A flow rate of 1 ml/min and above is considered normal. A level below 1 ml/min is xerostomic, indicating a high-risk situation. Investigation of the reason for the low flow rate is an important step in the patient treatment. Record saliva flow rate on the Caries Risk Assessment form (under **7. Laboratory Tests**).

***2. Bacterial testing: CRT bacteria test:** In the USA one of the two currently available “chair-side” tests for cariogenic bacterial challenge is the Caries Risk Test (CRT) marketed by Vivadent (Amherst, NY). It is sufficiently sensitive to provide a level of low, medium or high cariogenic bacterial challenge. It can also be used as a motivational tool for patient compliance with an antibacterial regimen. Other bacterial test kits will likely be available in the near future. The following is the procedure for administering the currently available CRT test. Results are available after 48 hours.

The kit comes with two-sided selective media sticks that assess mutans streptococci (MS) on the blue side and lactobacilli (LB) on the green side.

- a) Remove the selective media stick from the culture tube. Peel off the plastic cover sheet from each side of the stick.
- b) Pour the collected saliva over the media on each side until it is entirely wet.
- c) Place one of the sodium bicarbonate tablets (included with the kit) in the bottom of the tube.
- d) Replace the media stick in the culture tube, screw the lid on and label the tube with the patient’s chart number and date. Place the tube in the incubator at 37 °C for 48 hours.
- e) Collect the tube after 48 hours and compare the densities of bacterial colonies with the pictures provided by the incubators indicating relative bacterial levels. The dark blue agar is selective for mutans streptococci and the light green agar is selective for Lactobacilli.
- f) Record the level of bacterial challenge for mutans streptococci and Lactobacilli in the patient’s treatment record and on the Caries Risk Assessment form (under **7. Laboratory Tests**) as low, moderate or high.

Patient Recommendations for Control of Dental Decay-ADULTS/CHILDREN OVER AGE 6

Patient Name: _____ Chart # _____

I. LOW RISK

Daily Oral Hygiene (Aimed at reducing the overall bacteria in the mouth, especially at sites likely to decay. Choose the recommendations based on the danger sites and the condition of the mouth)

____ brush twice daily (with fluoride toothpaste, all patients) ____ floss daily ____ Superfloss
____ interproximal brush ____ Stimudents ____ toothpick
____ other: _____

Diet (The most important thing is to reduce the number of snacks between meals that contain carbohydrates, especially sugars. Substitution by snacks rich in protein, such as cheese, will also help)

____ OK as is ____ limit snacking ____ limit sodas
____ other: _____

Fluorides (All patients should use fluoride toothpaste twice daily). Additional fluoride products should be added, depending on whether the risk level is medium or high. Home fluoride products must be used daily to be effective).

____ regular fluoride-containing toothpaste
____ fluoride rinse (0.05 % NaF, **ACT** or **Fluorigard**) 2X/day (use twice a day, once in the morning after breakfast and once last thing at night. Continue long term with older patients or those who need or want extra protection).
Note that **ACT** contains no alcohol and may be preferred by a patient with dry mouth.)

Xylitol gum/mints (The gums or mints that contain xylitol cannot cause cavities. In addition, xylitol has an anti-cavity effect against the decay-causing bacteria. Look for xylitol products at stores that list "xylitol" as the first ingredient, or even better (and cheaper) search for "pure" xylitol products, under "xylitol" on the World

Wide Web. Xylitol can be used as a sugar substitute even while cooking or baking; however, it may cause diarrhea if used in excess.) **Note: xylitol is a "special" sugar substitute that tastes just like table sugar. Other sugar substitute products will not have its cavity fighting properties and table sugar is sure to make**

things worse.

____ Chew xylitol gum for 5 minutes after snacks or at least 3-5 times/day.
____ Use xylitol mints 3 – 5 times/day
____ office fluoride trays
____ office fluoride varnish

II. MODERATE TO HIGH RISK (ALL THE ABOVE PLUS:)

Daily high concentration fluoride

____ **Prevident 5000 Plus (high fluoride toothpaste)**
____ **Prevident** "brush-on" nightly, **OR** in custom tray 10 min./night (For high risk patients, especially those with low saliva flow, or root caries, or active cavities. Continue until the risk status is lowered, then revert to fluoride as above).

Antibacterial rinse

____ **Chlorhexidine gluconate, 0.12% (Periogard, Peridex, Oral Rx, available on prescription).** Rinse 1 minute with ½ oz. at bedtime for one week (discontinue **ACT** or **Fluorigard** for this week). Stop for three weeks (resume use of **ACT** or **Fluorigard** during this time). Repeat chlorhexidine rinse for one week each month.
____ 10% providone iodine (**Betadine**) to be **administered by dental professional only** (ask about allergies and contraindications). Rinse or swab topically for 1-2 minutes 1x/mo.

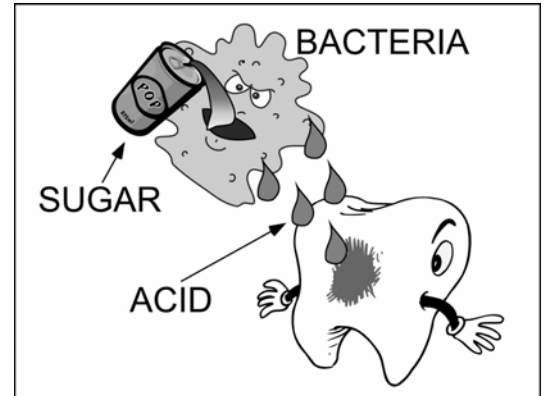
III. FOR DRY MOUTH (ALL THE ABOVE PLUS:)

____ baking soda toothpaste with fluoride
____ baking soda gum - **Dental Care Gum** (Arm & Hammer, or similar product containing baking soda and xylitol.) Chew frequently throughout the day, especially after snacks.
____ rinse frequently with baking soda suspension during the day, especially after snacks. (Fill a sports water bottle with water and add 2 teaspoons of baking soda for each 8 oz. of water).
____ fluoride lozenges (**Lozi-Flur** or **Flur-a-day**) 1X/day (use for high risk patients with low saliva flow, such as radiation xerostomia.) By dissolving in the mouth, these lozenges provide a concentrated fluoride reservoir to protect against mineral loss, and to enhance repair by remineralization. Dissolve slowly in mouth by holding the lozenge in a convenient place
____ Calcium and phosphate enhancing products (**MI Paste with Recalcident**)

Doctor signature _____ Date: _____ Re-evaluation due in _____ months

How Tooth Decay Happens

Tooth decay is caused by certain types of bacteria (mutans streptococci and Lactobacilli) that live in your mouth. When they attach themselves to the teeth and multiply in dental plaque, they can do damage. The bacteria feed on what you eat, especially sugars (including fruit sugars) and cooked starch (bread, potatoes, rice, pasta, etc.). Within about 5 minutes after you eat, or drink, the bacteria begin producing acids as a by-product of their digesting your food. Those acids can penetrate into the hard substance of the tooth and dissolve some of the minerals (calcium and phosphate). If the acid attacks are infrequent and of short duration, the saliva can help to repair the damage by neutralizing the acids and supplying minerals and fluoride that can replace those lost from the tooth. However if: 1. your mouth is dry, 2. you have many of these bacteria, 3. you snack frequently; then the tooth mineral lost by attacks of acids is too much, and cannot be repaired. This is the start of tooth decay and leads to cavities.



Methods of Controlling Tooth Decay

Diet: Reducing the number of sugary and starchy foods, snacks, drinks or candies can help reduce the development of tooth decay. That does not mean you can never eat these types of foods, but you should limit their consumption particularly when eaten between main meals. A good rule is 3 meals per day and no more than 3 snacks per day.

Fluorides: Fluorides help to make the tooth more resistant to being dissolved by the bacterial acids. Fluorides are available from a variety of sources such as drinking water, toothpaste, over-the-counter rinses, and products prescribed by your dentist such as brush-on gels used at home or gels and foams applied in the dental office. Daily use is very important to help protect against the acid attacks.

Plaque removal: Removing the plaque from your teeth on a daily basis is helpful in controlling tooth decay. Plaque can be difficult to remove from some parts of your mouth especially between the teeth and in grooves on the biting surfaces of back teeth. If you have an appliance such as an orthodontic retainer or partial denture, remove it before brushing and flossing your teeth. Brush all surfaces of the appliance also.

Saliva: Saliva is critical for controlling tooth decay. It neutralizes acids, and provides minerals and proteins that protect the teeth. If you cannot brush after a meal or snack, you can chew sugar-free gum. This will stimulate the flow of saliva to help neutralize acids and bring lost minerals back to the teeth. Sugar-free candy or mints could also be used, but some of these contain acids themselves. These acids will not cause tooth decay, but they can slowly dissolve the enamel surface directly over time (a process called erosion). Some sugar-free gums are designed to help fight tooth decay and are particularly useful if you have a dry mouth (many medications can cause a dry mouth). Some gums contain baking soda (*Dental Care Gum*, Arm & Hammer) that neutralizes the acids produced by the bacteria in plaque.

Gum that contains Xylitol as its first listed ingredient is the gum of choice. If you have a dry mouth, you could also fill a drinking bottle with water and add 2 teaspoons of baking soda for each 8 ounces of water and swish with it frequently throughout the day. Toothpastes containing baking soda are also available from several companies.

Antibacterial mouth rinses: Rinses that your dentist can prescribe are able to reduce the numbers of bacteria that cause tooth decay and can be useful in patients at high risk for tooth decay.

Sealants: Sealants are plastic coatings bonded to the biting surfaces of back teeth to protect the deep grooves from decay. In some people the grooves on the surfaces of the teeth are too narrow and deep to clean with a toothbrush, so they may decay in spite of your best efforts. Sealants are an excellent preventive measure used for children and young adults at risk for this type of decay. Currently, there are new sealant materials made of glass ionomer that act as a long-term fluoride delivery system, but may not last as long as resin.