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**COSMETIC & GENERAL DENTISTRY**

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## **Two New Diagnostic Tests of Saliva are Critical in Preventing Tooth Decay**

Dental caries, commonly known as tooth decay or a cavity, is a multi-faceted process that involves bacteria in the mouth, a patient's oral environment and the food and drinks being consumed. When combined, these factors determine if cavities will begin to form. Traditionally, prevention of tooth decay focused on preventive homecare and the adjusting of our diets to decrease foods that could compromise teeth.

While this traditional method is effective, new research allows us to go a step further in diagnosing, preventing and treating tooth decay. There are two new, non-invasive, salivary tests that can help pinpoint which factors are responsible for tooth decay and assist with specific treatment options to prevent the process leading to cavities.

The first test is a test of saliva quality, pH and buffering capacity. The patient's saliva has a marked effect on the body's ability to fight tooth decay and the bacteria in the mouth. The amount, consistency and pH of the saliva all affect the body's ability to neutralize acid and prevent breakdown of the teeth. This salivary test will test the patient's quality, quantity and buffering capacity of the saliva, which can in turn help when formulating an individual plan for the prevention and treatment of tooth decay.

The second test is a salivary test for streptococcus mutans, a strain of bacteria that plays a leading role in the formation of tooth decay. This salivary test uses markers in a patient's saliva to read the amount of bacteria present in the patient's mouth. Easy to administer, this test provides results in just 15 minutes. This is a valuable tool in devising a plan for the prevention and treatment of tooth decay.

These saliva tests may be recommended for those who fit the following profiles:

- New patients; predominantly children and older adults
- Patients with lower natural oral protection due to “dry mouth”
- Patients with low oral pH, an acidic diet or high frequency of fermentable carbohydrates
- Patients currently being treated for root surface decay
- Patients anticipating extensive restorative treatment (to avoid recurrence a of decay)
- Parents- or guardians-to-be, to prevent transmission of tooth decay bacteria

The importance of saliva testing is three-fold: it is an important examination tool for educating patients; it assists in preventive treatment planning; and it allows for the oral health care provider to begin making changes in a patient’s oral hygiene routine.

Understanding a given patient’s saliva characteristics provides the dental professional with valuable information to create the best possible treatment plan for each individual patient.