

DR. LISA MARIE SAMAHA

LOCAL DENTIST FIRST IN VIRGINIA CERTIFIED IN GROUND BREAKING DNA TESTING FOR PERIODONTAL DISEASE

Port Warwick Dental Arts

Center for Cosmetic Dentistry and Dental Medicine

251 Nat Turner Boulevard

Newport News, VA 23606

(757) 223-9270

www.PWDentalArts.com



Dr. Lisa Marie Samaha

Member, American Academy of Cosmetic Dentistry
Fellow, Academy of General Dentistry
Assoc. Member, American Academy of Periodontology

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Where Smiles Become Works of Art

Were the sum of our parts, but just how intricately interwoven and complex those parts are have only recently become apparent. With the advent of DNA testing and our emerging understanding of how the genetic codes that constitute the human body interact, we are unraveling many of the mysteries of disease.

One of the most exciting new discoveries in this field is the direct link between periodontal disease (gum disease) and our genetic makeup. The test has recently become available, and to date, there is only one dentist in the state of Virginia who is certified to administer it.

The test, known as a DNA-PCR (Poly-

merase Chain Reaction), integrates the nationally recognized clinical dental skills of Dr. Lisa Marie Samaha with the creative persona that is on display throughout her Port Warwick office. There are actually two periodontal DNA tests that are critical in assessing periodontal risk. "They are simple tests for the patient to have," says Dr. Samaha. "A cheek swab is taken for one and small strips of sterile paper are gently inserted under the gum line for the other. This is CSI technology."

The tests are best run simultaneously, giving Dr. Samaha a complete picture of the patient's oral health. The human DNA testing indicates what level of inherited risk the patient has for gum disease and a second DNA bacterial test delineates the quality and quantity of bacteria that are causing that patient's periodontal disease. Test results are available within two weeks.

After the test results return, Dr. Samaha's skills become apparent. This is when the art and science of dentistry come together. "The science," she notes, "is in the test results. The art is in determining, from clinical knowledge and experience, what to do with the science. We have been the only practice in Virginia performing the testing and have evaluated hundreds of tests to date."

Periodontal disease is contagious, preventable and pervasive—estimates are that 90 percent of the adult population of the United States has contracted it at some point in their lives. Genetic testing is an important new tool in the treatment of this disease. And although it is believed that only 33 percent of patients have inherited a genetic predisposition to periodontal disease, nearly 85 percent of adults have it now.

It is a multifaceted, inflammatory disease process that involves more than genetics. Dr. Samaha believes "knowing if you have the genetic marker for periodontal disease is the first step in determining how your disease should be treated."

Thousands of studies worldwide have connected periodontal disease with total body disease, to include diabetes, heart disease, Alzheimer's disease, various cancers and complications during pregnancy. "This test is critical for women of childbearing years, not to mention the rest of us at risk for heart attack, stroke and diabetes," Dr. Samaha says. "The

dangers for the unborn child and the expectant mom are just too high for us to ignore this connection."

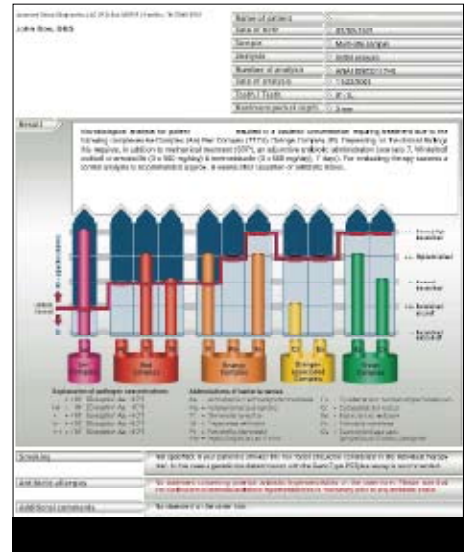
There are four levels of genetic susceptibility to periodontal disease—genotypes one through four. Individuals with a genotype one have no genetic risk for periodontal disease. Those with a genotype two have a moderate risk, and those with genotypes three and four are at the highest risk.

Patients with a genotype three and four will often find that they suffer from recurring bouts of gum disease and that treatment is often difficult and lengthy. With the results suggested by the DNA testing, Dr. Samaha will know which of her patients require a more aggressive treatment and more careful monitoring. "The testing unravels the mystery we have so long been witnessing in the traditional treatment of periodontal disease," says Samaha. "DNA-PCR testing is one of the most significant advances to ever come along for the diagnosis and treatment of periodontal disease." Surprisingly, each of these highly sophisticated tests only cost between \$150 and \$175, a remarkable value for what they offer in the way of knowledge.

Dr. Samaha recommends early testing of genetic susceptibility to periodontal disease. "This is not something you want to wait until you're 50 years old to have," she says. "Children as well as adults suffer from gum disease, and the earlier we understand its causes, the earlier we can treat it. At Port Warwick Dental Arts we have always been pro-active and preventive in treating all forms of dental disease. It just makes sense."

Simultaneously testing her patients' genetic predisposition to gum disease and what bacteria are present, Dr. Samaha is able to tailor a treatment program specific to the each of her patients.

"There are over a dozen different bacteria implicated in periodontal disease," Dr. Samaha explains. "In the



past, dentists would have to use broad spectrum antibiotics when the infection became aggressive because we weren't certain which bacteria were causing the disease. This is how resistant strains of bacteria occur. Now, if an antibiotic is warranted, we know exactly which bacteria we are targeting so we can attack only those."

Dr. Samaha combines a number of therapies to create the best outcome for her patients. With 25 years of experience in dentistry, a wide range of expertise, and ongoing training and research, Dr. Samaha is qualified in both laser therapy and traditional surgical techniques. Her protocol also includes the integration of specifically targeted nutrients developed for the treatment of periodontal disease. "Nutritional support of the delicate periodontal tissues is one of the most important, overlooked and underrated aspects in the treatment of periodontal disease," she says. "It is integral to a successful and stable outcome, whether or not one has inherited the genetic marker for gum disease."

The use of DNA screening in the treatment of periodontal disease is part of a growing trend that recognizes that the individual specialties of the medical arts are, in fact, interrelated. "Dentistry is becoming clearly integrated into mainstream medicine," Dr. Samaha says. "And it must be in order for patients to receive optimal treatment."