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Dentistry for Diabetics™

From Your DentistryForDiabetics (DFD) Professional
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Informed

The truth about the diabetic & oral care

How a Group of Dentists Responded to Growing Needs of Diabetics

In this month's newsletter, you will be seeing something different. Recently, we sat down with leading oral health diagnostician and founder of DentistryForDiabetics℠, Dr. Charles Martin, to get his thoughts on the connection between oral health and diabetes. This is the first part in a two-part series based on that interview.

In this month's issue, Martin will discuss what he believes to be the biggest dental and periodontal health risks for the diabetic patient. He'll update us on the progress that has been made toward the goals of his organization. And he'll share his thoughts about the research that's been done and is yet to be done, and more.

While what Martin has to say will undoubtedly be interesting and thought-provoking. What may be most surprising is how little Dr. Martin is willing to take credit for.

Dr. Charles W. Martin is the founder of DentistryForDiabetics

Did You Know?

Periodontal disease has been linked to heart disease, kidney disease and hyperglycemia in diabetic subjects.

Why DentistryForDiabetics?

As you know, diabetes is a complex, systemic disease affecting 24 million Americans (and there are another 57 million pre-diabetics in the U.S.). Diabetes is responsible for vascular, retinal, nephropathic and neuropathic complications, along with altered wound healing.

It also affects the oral health of the patient.

Diabetics develop periodontal disease at an average rate 2.4 times that of systemically healthy individuals (they also have a higher incidence of other oral health disease, such as xerostomia, candidiasis and lichens planus). Oral complications, in turn, have been linked to other diabetes-related comorbidity. Gum disease is a predictor of end-stage kidney disease.[1] And periodontal disease has also been linked to higher rates of cardiovascular disease among diabetics.[2]

And yet according to an oral health survey published in J. of the American Dental Association (2000), we know that diabetics are less likely to visit their dentist for regular, preventive care than non-diabetics.[3]

"Oral health and general health are inseparable."

-U.S. Surgeon General
Dept of Health and Human Services
Oral Health in America 2000

In 2007, a group of like-minded dentists in the United States, founded an organization called DentistryForDiabetics[sm]. The organization was created in response to many of the above-mentioned research findings. It was also created in response to what these dental practitioners and diagnosticians have witnessed among their diabetic patients over the last 29 years.

They have seen a rise in the number of diabetic and pre-diabetic patients. And they have seen a similar rise in oral health diseases related to the patient's diabetic state – most notably, higher rates of xerostomia and associated dental caries, candidiasis and periodontal disease (and associated tooth loss, aveolar bone loss and endetulism). Rates that are confirmed by several research studies.[4-9]

That vast patient population, made up of diabetics (both type 1 and type 2), often presented with poor to marginal glycemic control and classic comorbidity. What is interesting is that, when these patients were treated with aggressive oral health methods including debridement and antimicrobial treatments (along with their normal medications) – glucose levels often normalized. This same result has been observed among researchers.[Loos et al., 2000; Wu et al, 2000; F. Nishimura and Y. Murayama*. Periodontal Inflammation and Insulin Resistance-Lessons from ObesityJ Dent Res 80(8):1690-1694, 2001]

So, nearly a year after DentistryForDiabetics[sm] was formed, we sat down with its founder to find out what the organization has accomplished, what affect they have had on the individual patient and what he believes are the most pressing issues for oral health and the diabetic.

Check it out:

When research subjects were asked if they believed there oral health would be better if they did not have diabetes, 44.1% said "No". And 37.4% said they were "Not sure". Just 18.2% answered "Yes".

Paul A. Moore, et al. Diabetes and Oral Health Promotion: A Survey of Disease Prevention Behaviors. J Am Dent Assoc, Vol 131, No 9, 1333-1341

A Question & Answer Interview with the Founder of DentistryForDiabetics℠

Dr. Charles Martin, D.D.S., the founder of DentistryForDiabetics℠, has practiced dentistry for more than 29 years. A 1975 biology graduate of Virginia Tech, Dr. Martin earned his DDS from the Medical College of Virginia School of Dentistry in 1979. His post-doctoral training includes the Misch Implant Institute, the Dawson Center for Advanced Dental Education and the L.D. Pankey Institute for Advanced Dental Education. In addition to founding DentistryForDiabetics℠, Dr Martin has written several books concerning dentistry, oral health and diabetes — including *Don't Sugar Coat It: The Story of Diabetes and Dentistry, What they Didn't Tell You*.

The Interview

Q: Dr. Martin, let's just jump right into things. Why did you and your colleagues form the DentistryForDiabetics organization?

Dr. Martin: Let me start off by saying, we are not the first to recognize that oral health is intricately linked to diabetes. There are research findings dating back to 1974 that link oral health and diabetes. However, what we were seeing was that the increased incidence of diabetes was being matched, and in some cases outpaced, by periodontal disease, endetulousness and candidiasis rates.

Whether you believe oral health's biggest impact on diabetes is:

- As a marker for other diabetes-related complications like heart disease and kidney disease
- Or as the "tool" to enable diabetics to chew lots of fiber-rich foods and grains
- Or that its connection is more complex – affecting glycemic control, inflammatory response and systemic infection

The most important point is that oral health is inextricably linked to the overall health and wellbeing of the diabetic.

Our organization is dedicated to helping patients and their diabetic care practitioners prevent or delay onset, and manage those who have diabetes. We do this by screening "at risk" individuals and referring to physician. We do it by educating patients about the impact of oral infection on glycemic control. And we do it with regular, aggressive oral treatment and preventive hygiene.

Q: What progress have you made toward your goals so far?

Dr Martin: There has been very good progress this year. And, of course, it hasn't all been my doing.

Dr. Maria Ryan (director of clinical research and professor of oral biology and pathology, School of Dental Medicine, Stony Brook University, New York) joined other researchers to present her paper on the correlation between insulin resistance levels with periodontal disease progression at the 2008 ADA Congress in San Francisco. And Dr. George Taylor, associate professor at the University of Michigan School of Dentistry, presented his findings related to periodontal disease and

Did you know?

Type 1 diabetic subjects with poor metabolic control over the preceding 2-5 years had a significantly greater prevalence of deep probing depths and advanced attachment loss than subjects with good glycemic control.

— Tervonen T, Oliver R. Long-term control of diabetes mellitus and periodontitis. J Clin Periodontol 1993; 20:431-435.

microvascular and macrovascular complications.

DentistryForDiabetics[sm] launched an awareness campaign at the beginning of 2008 aimed at educating diabetic patients about the role oral care plays in their overall health, as well as the options they have in getting the care they need.

As part of that, we created the DFD web site earlier this year, where patients can get books, reports, etc. to help educate themselves.

And we're also reaching out to other diabetic care professionals from clinicians to physicians to offer ourselves as a resource in our mutual fight for the health of our patients. This newsletter is a part of that effort, as a matter of course.

Q: What do you see as your next priority?

Dr Martin: It is not so much my priority as it is a priority for the many dentists, researchers and diagnosticians who are concerned about this connection between oral health and the health of the diabetic. I think when you consider it that way. There are two priorities that we hope to make progress with in the next 12 months.

The first priority is to build a network of professionals interested in making a difference in the lives of the diabetic. That network includes training more dentists in the clinical knowledge they need to care for diabetic patients. It includes building collaborative relationships with other care professionals such as dieticians, social workers and physicians.

The second priority is really a call to researchers to continue to examine the etiology of diabetes-related oral health issues. Today, we know that oral health is impacted by diabetes. We know that the longer the patient lives with diabetes, for example, the greater the chance he or she will contract oral complications in much the same way he or she will contract other comorbidity. We also know that when diabetic patients are treated with diligent, rigorous oral care to combat oral infection and inflammation, we often see a reduction in hyperglycemic levels. However, further research needs to be performed to expose the precise mechanisms that trigger that outcome.

To be continued. . . .

Look for the second half this interview with Dr. Charles Martin in next month's issue of *Informed*.

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