Diabetes and periodontal disease

As the fifth deadliest disease in the United States, diabetes is one of our nation's heaviest health burdens. The American Diabetes Association estimates that nearly 21 million children and adults in America are living with diabetes, either diagnosed (15 million) or undiagnosed (6 million). An additional 41 million Americans are believed to be pre-diabetic, according to the American Diabetes Association.

Total costs associated with diabetes in the United States are in excess of $132 billion annually,[1] including $92 billion in direct medical costs and $40 billion in indirect costs resulting from disability, work loss and premature mortality.

The relationship between diabetes and oral health, specifically periodontal disease, is well accepted in the medical and dental communities. Observational studies have consistently reported evidence of a greater prevalence, incidence, severity, extent or progression of periodontal disease in diabetics. These studies also show that diabetic patients experience periodontal destruction at an earlier age than nondiabetic individuals.[2,3]

Population-based epidemiological studies, reinforced by clinical studies, have confirmed the association between diabetes and periodontal disease on the microbiological level and have proposed biochemical models to explain the relationship. For example, Salvi et al.[4] demonstrated that diabetes represents an increased risk for periodontal disease by a factor of 2.1 to 3.0.

Beyond the established role of diabetes worsening periodontal disease, researchers have hypothesized that severe periodontal disease increases the severity of diabetes mellitus and complicates metabolic control. A number of intervention studies have shown that treatment of periodontal disease improves glycemic control.[5,6] The association between the elimination of periodontal infection and improved glycemic control in diabetic patients lends support to the bidirectional models where diabetes increases periodontal disease incidence and severity, and where severe periodontal disease increases the severity of diabetes and complicates metabolic control.

EBICP benefits for persons with diabetes

With an indicator of a diabetes diagnosis, a participant is eligible for up to two additional dental visits in a benefit year for adult prophylaxis or periodontal maintenance. Coverage will be at the group-contracted benefit level, with the additional frequency allowance being the only change. There is no end date on this additional coverage. There is no age requirement and the patient may be the subscriber, spouse or other covered dependent.

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[1] National Diabetes Statistics, http://diabetes.niddk.nih.gov/dm/pubs/statistics/index.htm.

[2] Teng YT, Taylor GW, Scannapieco F, Kinane DF, Curtis M, Beck JD, Kogan S. Periodontal health and systemic disorders. J Can Dent Assoc. 2002 Mar;68(3):188-92.

[3] Losche W, Karapetow F, Pohl A, Pohl C, Kocher T, Plasma lipid and blood glucose levels in patients with destructive periodontal disease. J Clin Periodontology, 2000 Aug;27(8):537-41.

[4] Salvi GE, Yalda B, Collins JG, Jones BH, Smith FW, Arnold RR, Offenbacher S. Inflammatory mediator response as a potential risk marker for periodontal diseases in insulin-dependent diabetes mellitus patients. J Periodontology. 1997 Feb;68(2):127-35.

[5] Grossi SG, Skrepcinski FB, DeCaro T, Zambon JJ, Cummins D, Genco RJ. Response to periodontal therapy in diabetics and smokers J Periodontology. 1996 Oct;67(10 Suppl):1094-102.

[6] Iwamoto Y, Nishimura F, Nakagawa M, Sugimoto H, Shikata K, Makino H, Fukuda T, Tsuji T, Iwamoto M, Murayama Y. The effects of antimicrobial periodontal treatment on circulating tumor necrosis factor-alpha and glycated hemoglobin levels in patients with type 2 diabetes. J Periodontology. 2001 Jun;72(6):774-8.

[2] Teng YT, Taylor GW, Scannapieco F, Kinane DF, Curtis M, Beck JD, Kogan S. Periodontal health and systemic disorders. J Can Dent Assoc. 2002 Mar;68(3):188-92.

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