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In each issue of **Diabetes Resources** we have provided specific information about management for diabetes, including important tests and resources to help reduce complications associated with the disease. Information is included about the ABCs of diabetes: **A1C testing 2-4 times per year, Blood pressure screening at every visit, and annual Cholesterol testing. Additional clinical information is also provided. A dilated eye exam, sensory foot exam and screening for kidney disease are each recommended annually. Attention to these risk factors reduces the chance for cardiac, renal, eye and vascular disease secondary to diabetes.**

In support of the **New Mexico Adult Diabetes Practice Guideline 2011**, please see the reverse side of **Diabetes Resources** for recommendations for care including resources and tools that can help in your efforts to provide education and support among your patients with diabetes.

Check [www.nmtod.org](http://www.nmtod.org) for organizations that have graciously provided funding for **Diabetes Resources**.

New Mexico Health Care Takes On Diabetes, a New Mexico non-profit corporation, is a broad coalition of New Mexico's diabetes care professionals, New Mexico Health Plans, the New Mexico Department of Health, and the New Mexico Medical Review Association, with technical and administrative support from the American Diabetes Association.

# Diabetes Resources

## Practical Information for New Mexico Health Care Professionals



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## Oral Health Complications of Diabetes

### The Issue:

Research has established the health risk of oral health complications related to having diabetes. Complications associated with poorly controlled diabetes include gingivitis, tooth loss, dental caries, salivary gland dysfunction, taste disturbances, and soft tissue lesions such as oral candidiasis. The most significant complication, however, is usually periodontitis. (See illustration below.)

Compared to persons without diabetes or with well-controlled diabetes, periodontitis occurs more frequently and more extensively in people with moderate and poorly controlled diabetes. This is believed to be due to a number of pathophysiologic causes. (See sidebar below.) In a reciprocal manner, evidence suggests periodontitis, in turn, may worsen glycemic control in people with diabetes, thus creating a cycle that compromises diabetes management. While the evidence is not unequivocal and warrants further investigation, a number of preliminary studies addressing the reciprocal, bi-directional relationship between periodontal diseases and uncontrolled diabetes have demonstrated that treatment of periodontal infections can have a positive effect on lowering A1C levels.

Beyond glycemic control, functional issues may become prominent with periodontal disease. Loss of teeth or dental pain impairs speaking, swallowing, eating, and food choices of people with diabetes. This can significantly compromise overall health, the ability to maintain diabetes-appropriate diets, and ultimately glycemic control.

### Key Interventions to Minimize the Risk of Oral Complications of Diabetes:

- ❖ Recommend oral examination/screening of people with diabetes by dentist or dental hygienist at the time of diagnosis and at least annually thereafter.
- ❖ Discuss oral health as it relates to diabetes.
- ❖ Assess oral health risk status of patient and provide appropriate and timely referrals as indicated (download "Diabetes Oral Health Pathway" under resources for clinicians).

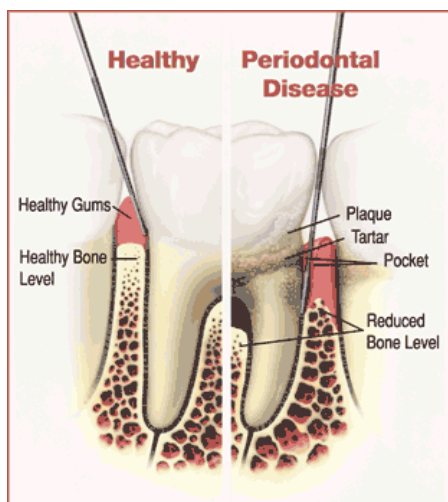


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The American Academy of Periodontology  
Accessible at [www.perio.org](http://www.perio.org)

### Pathophysiology of Periodontal Disease and Diabetes

- ❖ Uncontrolled diabetes impairs the host response and function of polymorphonuclear leukocytes (PMNs), the primary defense against periodontal pathogens, altering the response of periodontal tissues to local factors and hastening bone loss.
- ❖ Poorly controlled diabetes leads to increased collagenase activity and decreased collagen synthesis (which is an important component of the periodontium).
- ❖ Increased glucose in the saliva and blood of diabetic patients could alter the environment of the microflora of the oral cavity, promoting periodontitis.

## Resources for Clinicians

The following resources are FREE and can be downloaded from the New Mexico Health Care Takes On Diabetes website at [www.nmtod.org](http://www.nmtod.org). For further information contact Charm Lindblad, Executive Director, at 505.796.9121 or toll-free 1.866.796.9121.

**Oral Health Pathway: A Provider Tool**—This resource, created by University of New Mexico Division of Dental Hygiene, is a quick reference tool to assist health care providers in determining the appropriate timing for patients with diabetes, according to their individual risk factors, to be referred for dental services.

**Diabetes Dental Tips: A Patient Tool**—The National Institute of Dental and Craniofacial Research has produced a single-page patient education resource that introduces the relationship between diabetes and oral health. This resource describes potential oral health complications associated with uncontrolled diabetes and provides simple steps that a person should take to maintain oral health. A color version can be laminated for display or one-on-one patient education. There are no copyright restrictions. The form can be easily copied and given to patients to take home. It is available in both English and Spanish at [www.nidcr.nih.gov/NR/rdonlyres/9490033D-5CE4-4CFB-9755-FB5BB2A5545F/0/DiabetesDentalTips\\_Eng.pdf](http://www.nidcr.nih.gov/NR/rdonlyres/9490033D-5CE4-4CFB-9755-FB5BB2A5545F/0/DiabetesDentalTips_Eng.pdf).

**Working Together to Manage Diabetes: A Guide for Pharmacy, Podiatry, Optometry, and Dental Professionals**—The Department of Health and Human Services, in conjunction with the National Diabetes Education Program, has created a resource that could be used by healthcare providers for their own learning on the specifics of diabetes and encourages a team approach to the treatment of diabetes. This resource reviews the roles of multi-health care disciplines as they participate in the diabetes care team and promotes a collaborative effort in the treatment of a person with diabetes. This resource is available at [ndep.nih.gov/diabetes/pubs/PPODprimer\\_color.pdf](http://ndep.nih.gov/diabetes/pubs/PPODprimer_color.pdf).

### Websites—

The editorial committee has identified websites that you may find informative:

- ❖ National Institute of Dental and Craniofacial Research: [www.nidcr.nih.gov](http://www.nidcr.nih.gov)
- ❖ American Dental Hygienists' Association: [www.adha.org](http://www.adha.org)
- ❖ American Dental Association: [www.ada.org](http://www.ada.org)
- ❖ Keep your Teeth and Gums Healthy: [www.diabetes.niddk.nih.gov/dm/pubs/complications\\_teeth/teeth.pdf](http://www.diabetes.niddk.nih.gov/dm/pubs/complications_teeth/teeth.pdf)
- ❖ Want Some Life Saving Advice? Ask Your Dental Hygienist About Oral Signs and Symptoms of Diabetes: [www.adha.org/downloads/diabetes.pdf](http://www.adha.org/downloads/diabetes.pdf)
- ❖ For the Dental Patient...Diabetes and Oral Health: [www.ada.org/prof/resources/pubs/jada/patient/patient\\_18.pdf](http://www.ada.org/prof/resources/pubs/jada/patient/patient_18.pdf)
- ❖ National Diabetes Education Program: [www.ndep.nih.gov](http://www.ndep.nih.gov)
- ❖ American Diabetes Association Quiz: "Do You Know About Your Oral Health?" [www.diabetes.org/living-with-diabetes/treatment-and-care/oral-health-and-hygiene/do-you-know-about-your-oral.html](http://www.diabetes.org/living-with-diabetes/treatment-and-care/oral-health-and-hygiene/do-you-know-about-your-oral.html)
- ❖ American Diabetes Association: [www.diabetes.org](http://www.diabetes.org)
- ❖ National Institute of Health: [www.niddk.nih.gov/health/diabetes/diabetes.htm](http://www.niddk.nih.gov/health/diabetes/diabetes.htm)
- ❖ American Heart Association—Heart of Diabetes Program: [www.americanheart.org/diabetes](http://www.americanheart.org/diabetes)
- ❖ New Mexico Department of Health – Diabetes Prevention and Control Program: [www.diabetesnm.org](http://www.diabetesnm.org)

These websites may be accessed directly or through the New Mexico Health Care Takes On Diabetes website [www.nmtod.org](http://www.nmtod.org).\*

\*Please note that these websites do not necessarily represent the views of NMHCTOD. They are listed for your reference and convenience. NMHCTOD does not evaluate websites for content accuracy or application to any clinical situation.

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