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## Dental Considerations for Individuals with Diabetes

7<sup>th</sup> Annual Collaborative Diabetes Education Conference for Health Care Professionals  
April 5, 2013

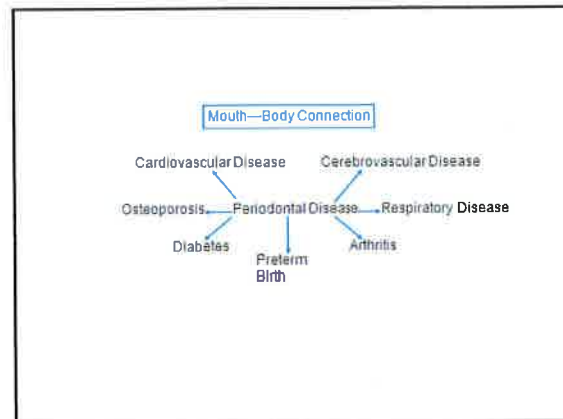
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## University of Cincinnati Dental Hygiene Program





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## Objectives

- Review the relationship between diabetes and dentistry.
- Formulate dental recommendations for individuals with diabetes.
- Synthesize a treatment plan to include oral health for individuals with diabetes.

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## Uncontrolled Diabetes → Oral Cavity

Uncontrolled—

- Decreased resistance to infection
- Compromised immune system
- Poor wound healing

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## Does periodontal treatment improve blood glucose control?

The findings in the dental literature are **INCONSISTENT**

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## Healthy Periodontium




Fig. 3.6 Attached gingiva: stippled texture

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## DM and Periodontal Therapy Trial

- Research question:  
*Does periodontal therapy improve BG control?*
- Multi-center study
  - 5 dental schools
- N = 600
  - T2DM
  - 35+ years old
  - 16+ teeth

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## Melanin Pigmentation



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## Periodontal Disease Healthy Periodontium




Fig. 3.3 Healthy periodontium: anterior view

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## Plaque Biofilm and Calculus




Fig. 3.2 Plaque: Along gingival margin

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## Plaque Biofilm and Calculus

Fig. 31.3. Elevated gingivitis: bright red and swollen.

Fig. 31.4. Chronic gingivitis: swollen and plaque-infected.

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## Gingivitis

Fig. 35.5. Diabetic gingivitis: with periodontal disease.

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## First Defense: Oral Hygiene

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## Gingivitis

Fig. 35.6. Diabetic gingivitis: swollen, fiery red.

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## Meticulous Oral Hygiene

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## Periodontal Disease

Fig. 37.8. Diabetic gingivitis: advanced periodontitis.

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## Periodontal Disease Bone Loss

Fig. 10.1. 1 Year 00 Examine: advanced periodontitis.

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Fig. 10.2. 2 Year 00 Examine: total periodontal bone loss.

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## Dental Issues Xerostomia

Fig. 10.3. 2 Year 00 Examine: AV, altered tongue texture.

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## Candidiasis

Fig. 57.3. Acute pseudomembranous candidiasis: diabetic.

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## Xerostomia

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## Dental Issues Erosion

Fig. 11.1. Erosion caused by intake of carbonated beverages.

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## Xerostomia Counseling Considerations

- Fluids with meals
- Ice chips between meals
- Tart, sour and citrus foods and beverages
- Moist foods
- Use of gravies and sauces
- Monitor CHO intake

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## Xerostomia Counseling Considerations

- Avoid
  - Dry, crumbly, sticky, spicy foods
  - Alcohol, commercial rinses containing alcohol
  - Tobacco products
  - Caffeine
- Use of products designed to relieve xerostomia
- Lip balm
- Humidifier

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## Dental decay





Fig. 23.3. Class V caries: maxillary incisors.

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## Dental Issues Angular Cheilitis



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## Dental Issues → Diabetes

- Makes control of blood glucose levels difficult
- May contribute to insulin resistance

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## Enlarged Parotid Gland




Fig. 24.1. Enlarged parotid gland in a patient with diabetes.

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## Dental Management

To start treatment, random blood glucose levels should be:

**70-200 mg/dl**

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## Dental Management

### Uncontrolled Diabetes

- Frequent dental recare appointments
- Local anesthesia without vasoconstrictors

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## Dental Management


### Uncontrolled Diabetes

- Reduce stress
- Appointments after meals
- Short morning appointments

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## Antibiotic or antimicrobial therapies

### Chlorhexidine Rinse



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## Dental Management

- Bring *Blood Glucose Monitoring System*
- Glucocorticosteroids with caution
- Fluoride therapy

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## Antibiotic or antimicrobial therapies


### Subgingival Irrigation



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## Education

- Normoglycemia
- Discuss increased susceptibility
- Encourage meticulous oral hygiene
- Encourage prescribed dental recare appointments



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## Tobacco Cessation

Remember her face and she'll follow you anywhere.

**More Doctors Smoke CAMELS than any other cigarette!**

Tipalet!

For 20 days, just Check in your "Check Your Teeth"!

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## Oral Self-Exam

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## Education

### Encourage tobacco cessation

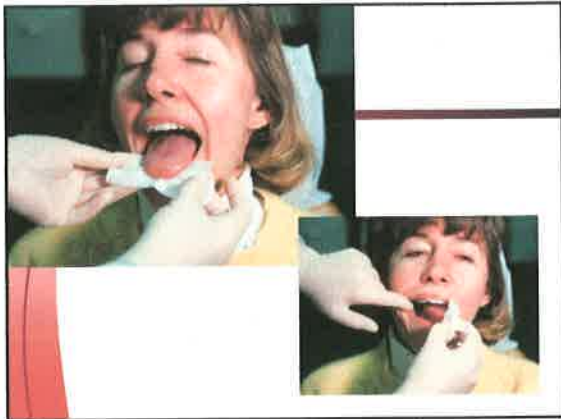
- Even smokeless tobacco

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## Monthly Oral Self-Exam

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## Oral Self-Exam



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"You can't always get what you want.  
But if you try sometime  
You just might find  
That you get what you need."

ROLLING STONES

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Questions, Comments,  
Answers, Solutions?