IS YOUR MOUTH REALLY PART OF YOUR BODY??

MAKING THE DIABETES AND ORAL HEALTH CONNECTION

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OBJECTIVES

- Identify at least 2 oral symptoms that could be related to diabetes

- Describe at least 2 impacts of diabetes management on oral health

- Identify at least 2 resources for health professionals and health navigators to access and collaborate for information on diabetes

ORAL HEALTH CONNECTIONS

Periodontal Disease Can Affect Your Diabetes & Body

Periodontal (Gum) Disease

Bacteria

Blood Vessel

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Oral Health = Overall Health

Oral Health and Diabetes in Michigan
What health professionals and patients need to know

Introduction

Diabetes and oral health are two of the leading health indicators in the United States. Diabetes can cause changes in the teeth and gums, especially when poorly controlled. Conversely, having poor oral health can lead to further complications of diabetes. Persons with diabetes are three times as likely to develop periodontal disease, are at greater risk of losing teeth, and have a harder time controlling their blood sugar. Dental and health professionals, as well as diabetes educators, are in a prime position to screen people for diabetes and oral related symptoms, offer guidance to the management of diabetes and oral health, and increase the patient's knowledge of the connections of diabetes and oral health.

Diabetes Mellitus or "Diabetes"

Diabetes refers to a group of metabolic diseases where high blood glucose ("sugar") levels result from either decreased insulin production or declining insulin action. There are three main types of diabetes: type 1, type 2 and gestational.

- In 2014, an estimated 10.4% of Michigan adults 18 years and older were diagnosed with diabetes, 799,350 people [1]
- Diabetes was the seventh leading cause of death in the United States and in Michigan in 2014. [1]
- At least 2,821 deaths were related to diabetes in Michigan in 2013. [1]

Oral Health in Michigan Adults

Oral health is a state of being free from chronic mouth and facial pain, oral and throat cancer, oral sores, birth defects, gum disease, tooth decay and loss, and other diseases and disorders that affect the oral cavity. [3]

- An estimated 31.7% of adults did not visit the dentist in the past year, and 15.6% had 6 or more teeth missing due to tooth decay or gum disease. [4]
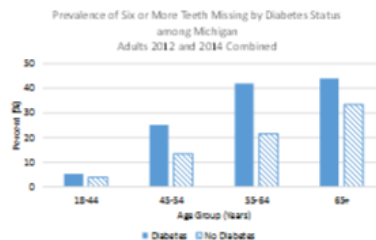- 34.5% of adults age 35-44 have lost at least one tooth due to caries, infection, or periodontal disease and 10.3% of adults age 65-74 have lost all their teeth. [4]

Oral Health and Diabetes in Michigan Adults

- More adults without diabetes (68.9%) visited a dentist in the past year compared to adults with diabetes (63.4%). [4]
- Adults with diabetes had a higher percentage of significant tooth loss (six or more teeth) compared to persons without diabetes, regardless of age, (see figure). [4]
- Among adults with diabetes, disparities in tooth loss existed by race (blacks, 48.5%, compared to whites, 32.3%) and smoking status (current smoker, 46.2%, compared to never smoked, 24.4%). [4]

Prevalence of Six or More Teeth Missing by Diabetes Status among Michigan Adults 2012 and 2014 Combined

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Oral Health and Diabetes in Michigan

Home care tips to give your patients:

- Brushing teeth twice a day and flossing once a day helps remove decay-causing plaque that builds up naturally on teeth.

- Controlling blood sugar levels prevents high levels of bacteria from forming in the mouth.

- Dental visits should be at least twice a year for checkups and cleanings. Some professionals recommend more frequent cleaning visits, every 3-4 months, for people with diabetes.

- If dentures are worn, dental checkups are still important. Remove dentures for cleaning daily.

- Avoid smoking and chronic, excessive alcohol intake.

- Visit the dentist if there is evidence of any of the following symptoms of gum disease: gums that bleed; gums that have pulled away from the teeth; pus that appears between your teeth and gums; and bad breath.

Management:

- Provide education on oral home care techniques and explain connections between oral health and blood glucose results. Have diabetes information materials in waiting room and treatment areas.

- Collaborate with primary care provider on management of care.

- Ask client about concerns and barriers to care; work on personal goals with the client; and collaborate with the client on treatment goals and their plan.

- Encourage routine visits to the dentist at least two times a year.

- Know the client's A1c level and screen intraorally for signs of inflammation, dry mouth, candidal infection, bad breath, periodontal disease, or dental decay.

- Encourage self-management education and on-going support as part of diabetes care.

Resources:

- www.michigan.gov/oralhealth
- www.michigan.gov/diabetes
- www.cdc.gov/oralhealth
- www.cdc.gov/diabetes
- www.ada.org/2650.aspx
- www.ndep.nih.gov

MDHHS
Michigan Department of Health & Human Services
RICK SNYDER, GOVERNOR
RICK LYON, DIRECTOR

References:
1. MDCH, Diabetes in Michigan Update – 2013. http://www.michigan.gov/documents/mdch/Diabetes_in_Michigan_Update_2013_416620_7.pdf
2. MDHHS, Division of Vital Records and Health Statistics
3. World Health Organization (WHO) http://www.who.int/topics/oral_health/en/
4. MDHHS, Michigan Behavioral Risk Factor Surveys (MiBRFS), 2012 and 2014

Prevalence of Six or More Teeth Missing by Diabetes Status among Michigan Adults 2012 and 2014 Combined
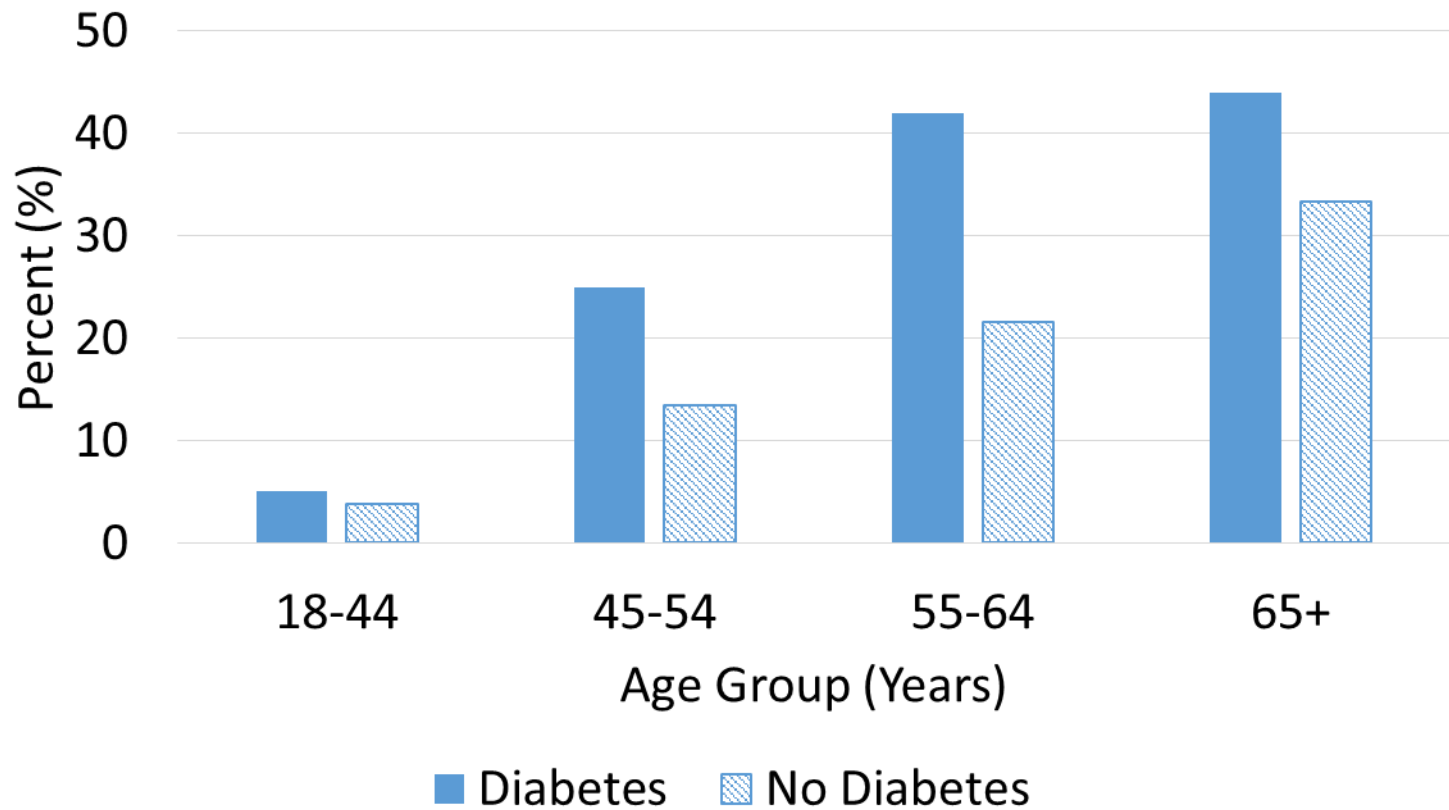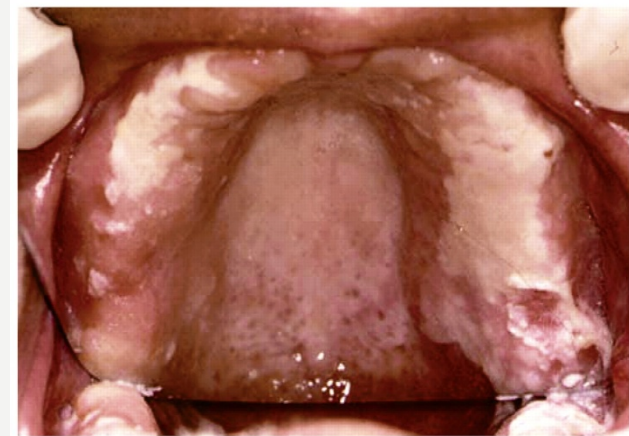
ORAL CONNECTIONS WITH DIABETES

The most common oral health problems associated with diabetes are:

- Tooth decay
- Periodontal (gum) disease
- Infection and delayed healing
- Salivary gland dysfunction
- Xerostomia
- Mucosal disorders
- Tongue/Taste impairment

ADA Accepted
American Dental Association ®

CLINICAL SYMPTOMS

Oral manifestations of diabetes and their mechanisms and interrelationships

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American Diabetes Association.
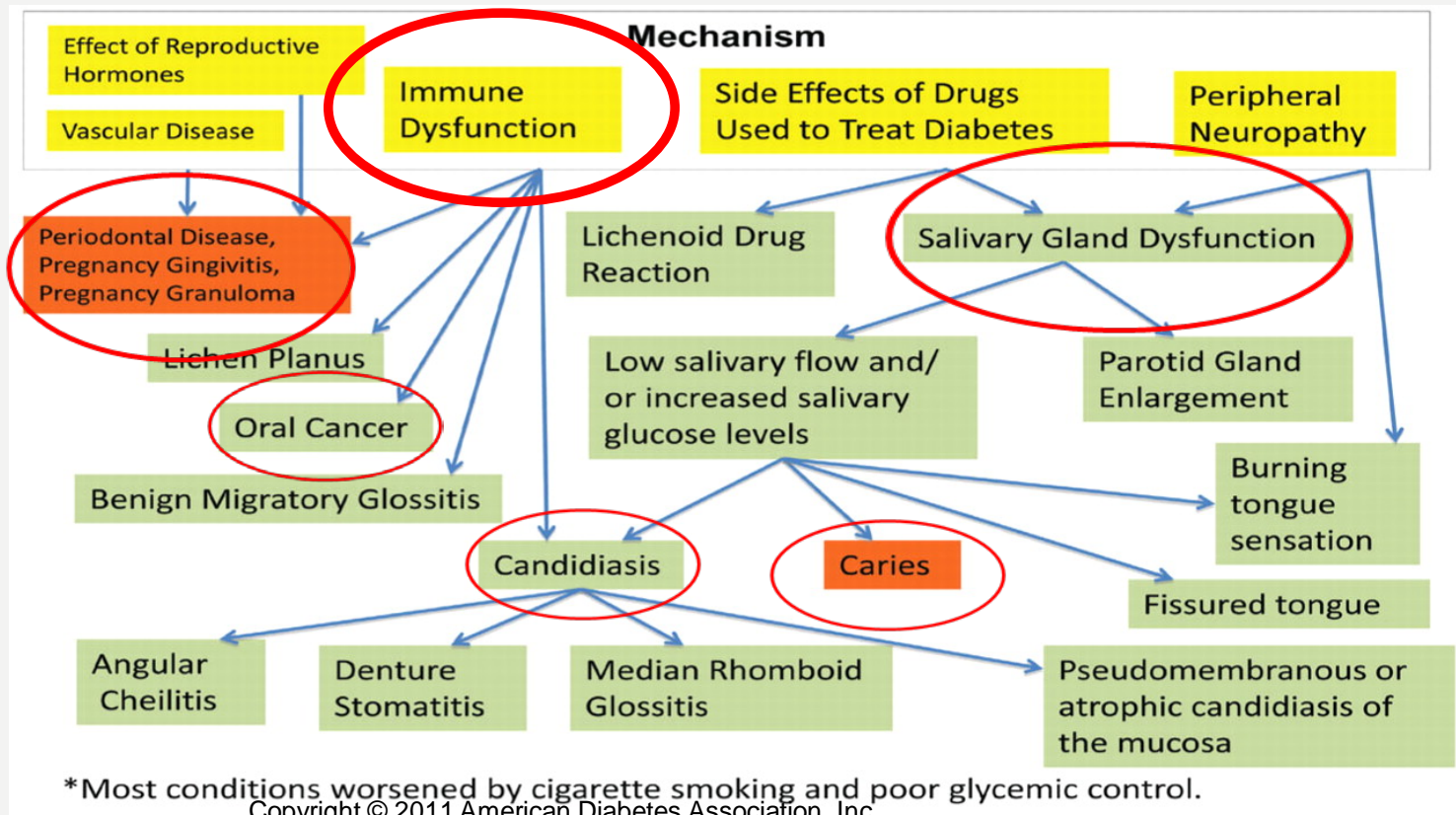
TOOTH DECAY

GINGIVITIS

PERIODONTAL DISEASE

SALIVARY GLAND DYSFUNCTION

- Enlargement of glands

- Decreased saliva flow

- Changes in saliva composition

- Xerostomia

- Most common with uncontrolled diabetes
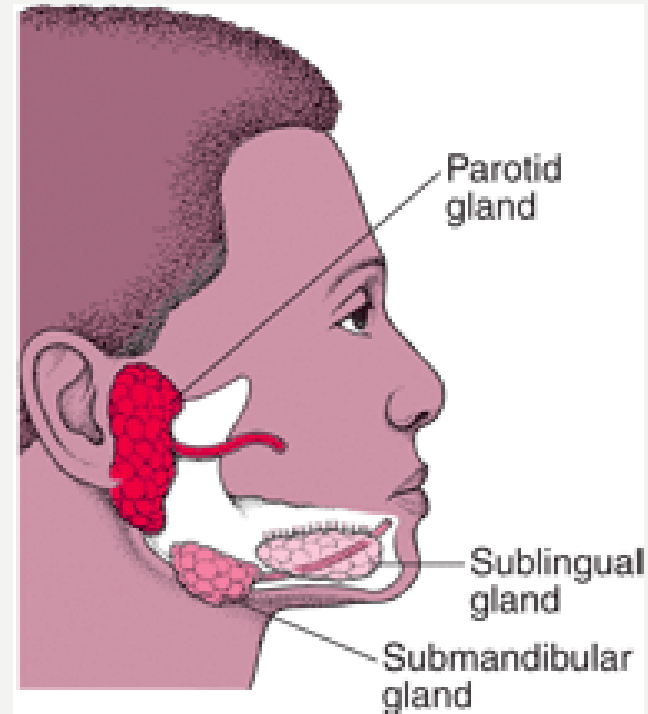
MUCOSAL DISORDERS

- Lichen Planus

- Lichenoid mucositis

- Atrophy of the mucosa

- Candidiasis (thrush)

TONGUE/TASTE IMPAIRMENT
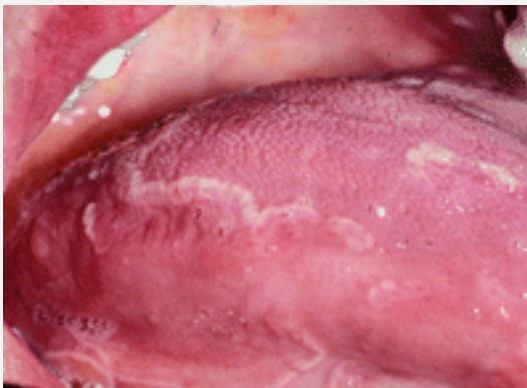
- Fissured tongue

- Atrophy of tongue papilla (bald tongue)

- Candidiasis

- Geographic tongue

- Angular cheilitis

SCREENING FOR DIABETES

- HP 2020 objective

- Several studies in dental offices

- Referrals to medical provider

- Tobacco cessation

- Enhanced education

MDHHS SURVEY

2016 Michigan Assessment of Blood Pressure and Diabetes Screening Practices among Oral Health Professionals

Figure 3. Comfort level taking BP

Legend:
- Very Comfortable
- Comfortable
- Neutral
- Uncomfortable
- Very Uncomfortable
- Missing

Values: 63.7%, 19.1%, 6.6%, 1.3%, 0.5%, 8.8%
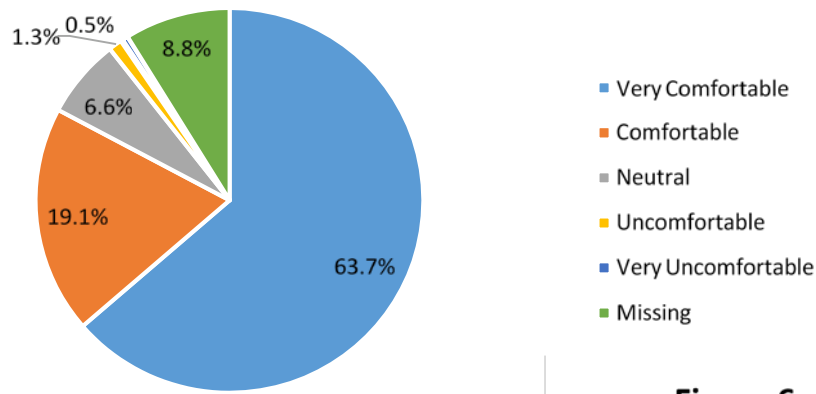
Figure 6. Comfort level screening for diabetes

Legend:
- Very Comfortable
- Comfortable
- Neutral
- Uncomfortable
- Very Uncomfortable
- Missing

Values: 18.0%, 18.3%, 27.5%, 9.7%, 3.8%, 22.7%
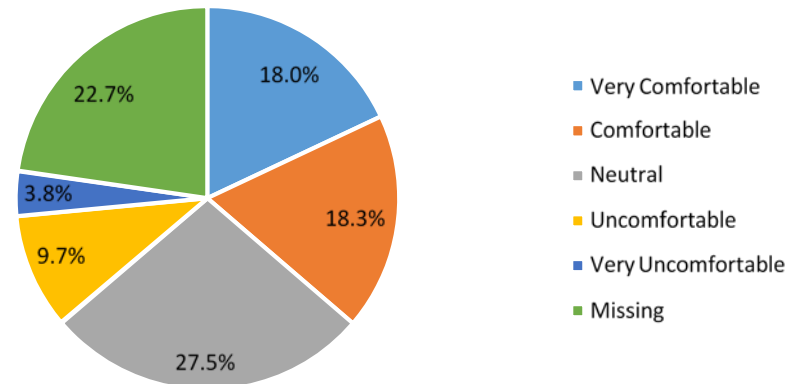
ORAL CARE MANAGEMENT

- Dental care visits

- Inclusive medical history

- Education on connections

- Home care

- Tobacco cessation

- Collaboration with medical and dental providers

- Goal setting

WHAT CAN YOU DO??

- Provide education on oral home care techniques and explain connections between oral health and blood glucose results.

- Have diabetes /oral health information materials available to patients.

- Collaborate with primary care provider/dental provider on management of care.

- Ask client about concerns and barriers to care; work on personal goals with the client; collaborate with the client on treatment goals and their plan and try to encourage taking care of oral cavity

- Encourage routine visits to the dentist at least one time a year. More often if active disease.

- Encourage self-management education and on-going support as part of diabetes care.

COLLABORATIONS

MICHIGAN Oral Health Coalition

MDHHS
Michigan Department of Health & Human Services

The Michigan Oral Health Program
Increasing Access to Prevention
Now that's something to SMILE about!

Diabetes and Oral Health

BE 1 WHO MANAGES DIABETES.
michigan.gov/diabetes

DPAC
Diabetes Partners in Action Coalition
Providing Statewide Leadership in Diabetes Support

TOBACCO-FREE MICHIGAN

RESODURCES

NIDCR
National Institute of
Dental and Craniofacial Research

Diabetes:
Dental Tips
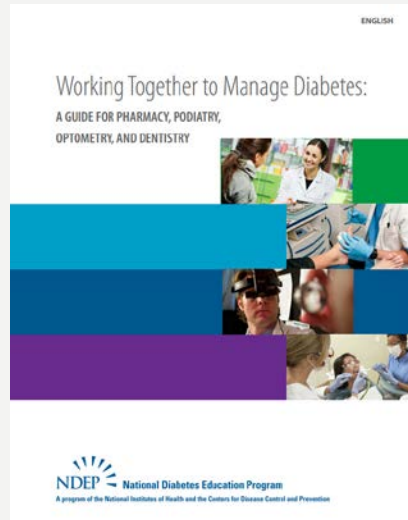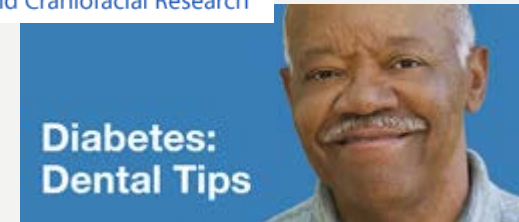
www.nidcr.nih.gov/OralHealth/Topics

ndep.nih.gov/

ada.org

Michigan.gov/oralhealth

dpacmi.org

idf.org/webdata/docs/OralHealth

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The Michigan Oral Health Program

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