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- CNE's are available for this live webinar. You must take the pre and post tests. 80% is required on the post test to receive CNE/CEU's.
- Certificates will be emailed out to you within two weeks



ORAL HEALTH CARE AND DIABETES



UDOH Oral Health Program
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ORAL HEALTH IS PART OF GENERAL HEALTH

- ▶ We can not be completely healthy without oral health being addressed too.
- ▶ Association between chronic oral infections &
 - Diabetes
 - Heart disease
 - Lung disease
 - Stroke
 - Low-birth-weight
 - Premature births



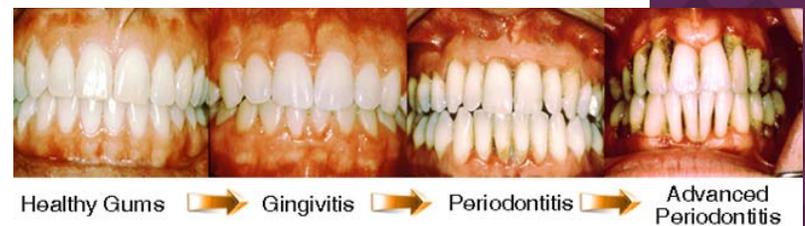
STATISTICS SAY...

- 1/3 of people with diabetes have severe periodontal disease (5mm or more of clinical attachment loss)
- 1 in every 5 cases of tooth loss (edentulism) is due to diabetes (JADA 144(5) May 2013)
- 18 % of cases of complete tooth loss in the US are attributable to diabetes.



MOST COMMON ORAL HEALTH PROBLEMS ASSOCIATED WITH DIABETES

- ▶ Tooth decay
- ▶ Periodontal (gum) disease
- ▶ Salivary gland dysfunction
- ▶ Fungal infections
- ▶ Infection and delayed healing
- ▶ Taste impairment





**Periodontal
(gum) disease is
one of the most
common, yet
least recognized
complications of
diabetes.**



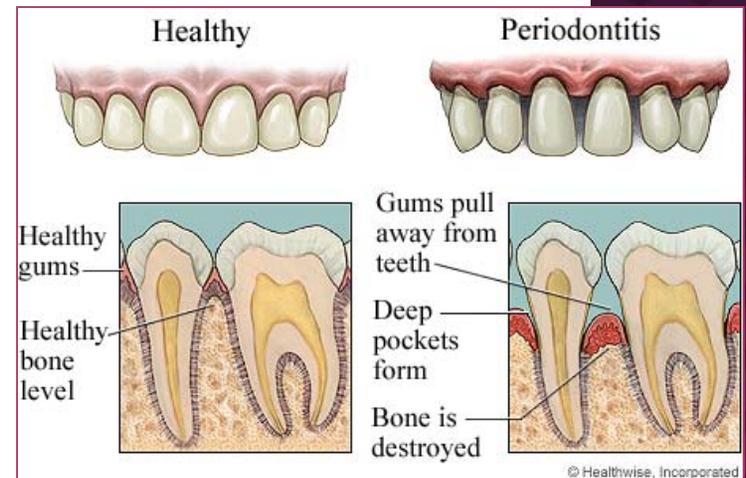
WHAT IS PERIODONTAL DISEASE?

1. **Inflammation** and **infection** that destroys the tissues that support the teeth.
2. This includes the gums, the periodontal ligaments, and the tooth sockets (alveolar bone).



PERIODONTAL DISEASE 101

- ◉ In a nutshell, it includes gingivitis and periodontitis....both serious infections that if left untreated, can lead to tooth loss.
- ◉ There are more bacteria in your mouth right now than there are people on Earth.



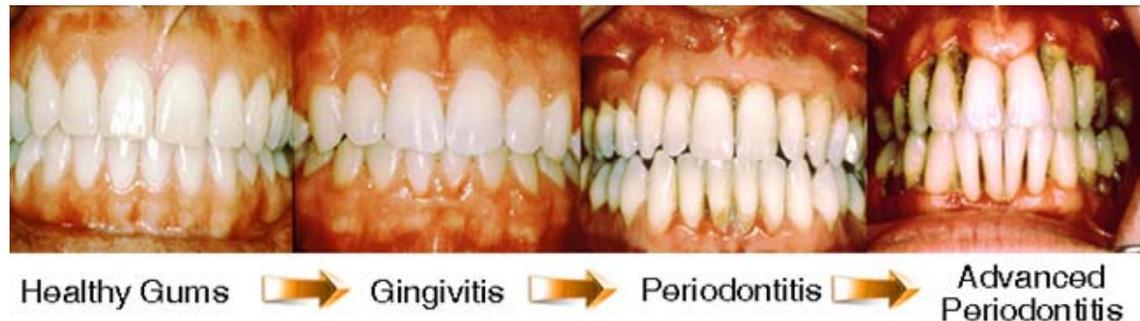
GINGIVITIS ~ PERIODONTAL DISEASE

- ◉ Gingivitis is reversible
- ◉ If left untreated, it can progress to periodontal disease (irreversible)
- ◉ Plaque contributes to inflammation

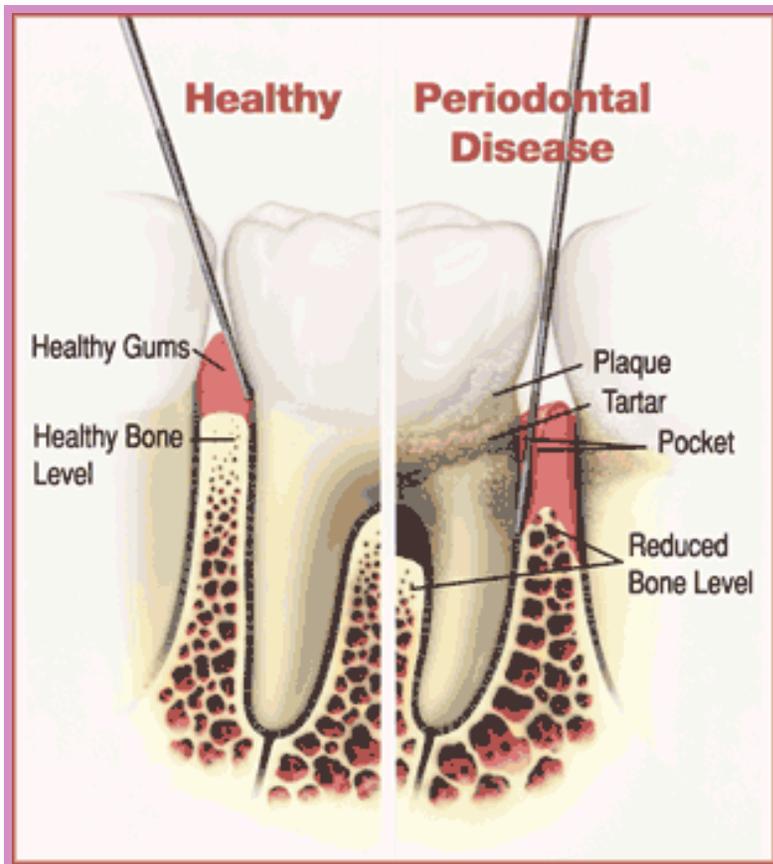


PERIODONTAL DISEASE

- ◉ Red or swollen gums that bleed during brushing and flossing and are tender to the touch
- ◉ *Primary cause of tooth loss in adults*
- ◉ Pus between the teeth and gums
- ◉ A consistent foul odor from the mouth
- ◉ Most of time NO pain -

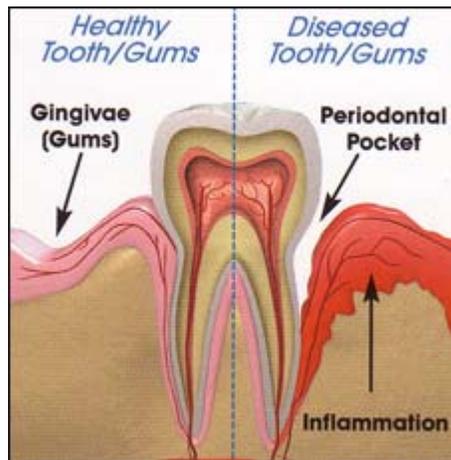


WHAT TO LOOK FOR?



- Gums that have pulled away from the teeth, exposing the roots
- Irreversible Bone Loss

PERIODONTAL DISEASE AND DIABETES



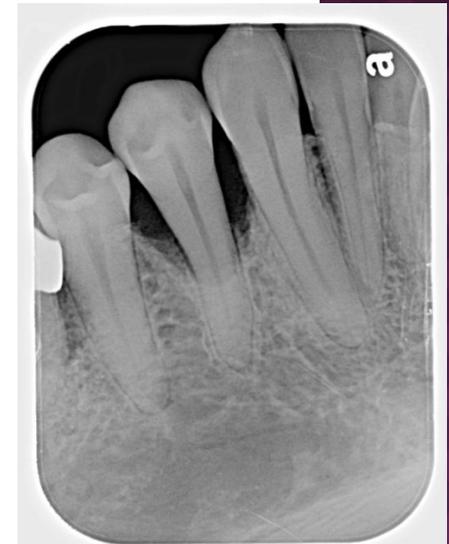
- ▶ Nearly 1/3 of people with diabetes have severe periodontal disease (CDC)
- ▶ Diabetics are 3 to 4 times more likely to develop periodontal disease
- ▶ Develop infections easier

PERIODONTAL DISEASE: EXACERBATION OF DIABETES AND POTENTIAL INITIATOR

- **PD disrupts glycemic control in diabetics**
 - associated with pre-diabetic conditions (impaired fasting glucose and impaired glucose tolerance)
 - causes insulin resistance (via cytokines)
 - impairs glycemic control (increased serum glucose and HbA1c levels)
- **Periodontal infections contribute to elevated systemic C-reactive protein (CRP) level**

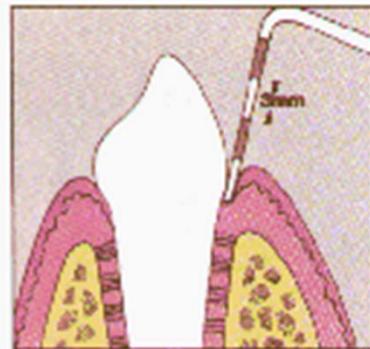
PERIODONTAL DISEASE (PERIODONTITIS)

- **50% of all Americans have some form of PD (~ 13% have severe disease)**
- **75% of all Americans have gingivitis**
- **Progression of gingivitis to PD**
 - **pockets form around the teeth**
 - **pockets gradually deepen and ulcerate**
 - **bone loss visible on x-rays**

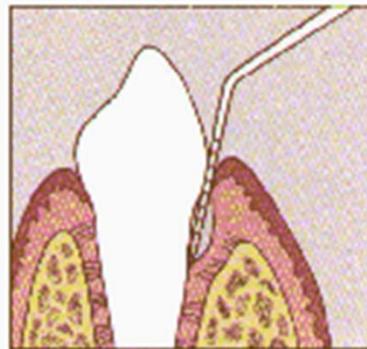


SUGGESTION...

- A comprehensive periodontal evaluation for those with Diabetes once a year is essential!



Periodontal probe of healthy gums.



Periodontal probe showing pockets.



PERIODONTITIS-INDUCED HYPERGLYCEMIA IS REVERSIBLE

- **Treatment of PD *improves* glycemic control in diabetics**
 - ~ 1% reduction in A1c levels
 - ~ 50mg/dL reduction in serum glucose
 - reduces insulin requirements
 - improvements more pronounced in patients with severe PD

RECENT ORAL CARE GUIDELINES AND SCREENING TOOLS

■ **Primary care provider**

- Med Hx of last oral examination
- Stress importance of oral hygiene
- Educate about diabetes/PD links and effect glycemic control
- Perform oral examination with referral to dentist if PD symptoms present
- Advise self-monitoring of oral health and importance of dental visit if symptoms are noted
- Promote healthy lifestyle (diet, exercise) and “ABC” goals (A1c, blood pressure, cholesterol levels)



RECENT ORAL CARE GUIDELINES AND SCREENING TOOLS

- **Dental provider**
 - Open communication with physician
 - *A comprehensive periodontal evaluation once a year*
 - Stress prevention, early detection, and treatment of PD
 - Emphasize oral hygiene and provide instruction with regular reinforcement
 - Advise physician of PD diagnosis and care plan
 - Monitor response to therapy 4-6 weeks post-treatment and consult physician for reevaluation of A1c level
 - Patient on recall 2-4 times per year depending on severity of the case



PERIODONTAL DISEASE AND DIABETES

- ◉ Infections affect glucose levels in the blood.
- ◉ Diabetes makes periodontal disease worse.
- ◉ Treatment of periodontal disease can influence diabetes.
 - Decreases insulin needs
 - Improves glycemic control
 - Decreases complications



**Diabetes reduces
the body's
resistance to
periodontal
infections.**



**Periodontal
disease affects
the control of
diabetes.**



OTHER COMPLICATIONS



CANDIDIASIS

- ◉ Sore white or red areas in the mouth
- ◉ Not enough saliva and too much sugar in the saliva allow the fungus to cause candidiasis or thrush



TREATMENT FOR CANDIDIASIS

- ◉ Topical Rinses
- ◉ Topical Creams
- ◉ Systemic Drugs
- ◉ Medicated Lozenges



XEROSTOMIA/DRY MOUTH

- ◉ Diabetes can affect the salivary glands so they don't produce enough saliva
- ◉ Affects chewing, tasting and swallowing
- ◉ More difficult to control blood sugar
- ◉ Higher risk for dental decay!



XEROSTOMIA AND BURNING MOUTH SYNDROME TREATMENT

Alter the drug regimen:

- Consult with physician to change xerostomia-causing drugs.

○ Salivary Substitutes

○ Symptomatic Treatments:

- Water
- Sugar-free candies, mints, and gum
- *Eliminate* alcohol mouthwash, tobacco, acidic liquids
- Different toothpaste

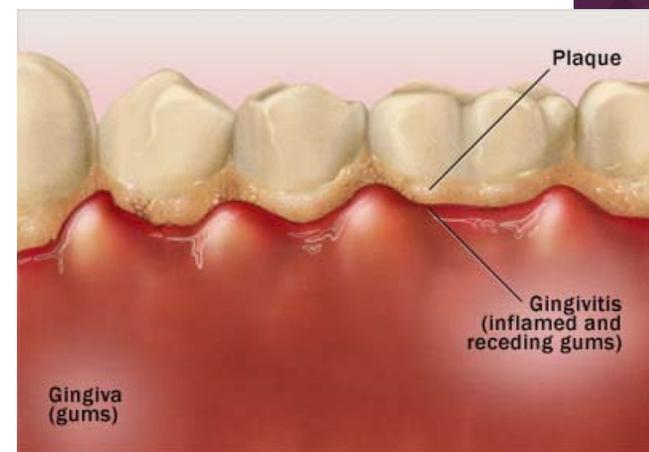
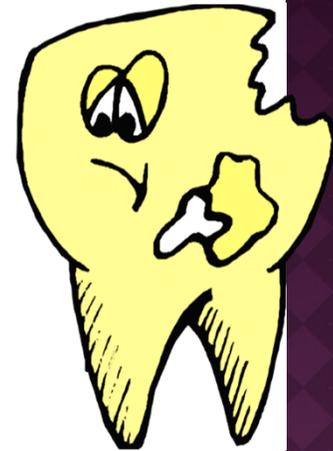
○ Cholinergic agonists: (Stimulate salivary glands)

Talk to Physician or Dentist about getting these RX



OTHER ORAL MANIFESTATIONS

- ◉ Dental caries
- ◉ Gingivitis
- ◉ Taste dysfunction



FLUORIDE TOOTHPASTE



- Help prevent dental decay with over the counter fluoride rinses and RX for more severe dry mouth



ORAL SURGERY COMPLICATIONS

- ◉ Remind the dentist that they have diabetes
- ◉ Eat before surgery
- ◉ Take the usual medications
- ◉ Plan for eating needs after surgery
- ◉ Wait until blood sugar is under control



Prevention!



RECOMMENDED PROFESSIONAL DENTAL CARE

- ◉ Regular dental examinations at least 2 times each year
- ◉ Periodontal evaluation and treatment (SRP), 2 to 4 times each year



MANAGE ABC'S

- ⦿ A1c ~ less than 7%
- ⦿ Blood pressure ~ 120/80 mmHg
- ⦿ Cholesterol ~ LDL "bad" cholesterol builds up
& clogs blood vessels. Know numbers!
- ⦿ Don't Smoke!

RECOMMENDED ~ METICULOUS HOME DENTAL CARE



- ◉ Brush at least 2 times a day to remove plaque, using a soft brush
 - Brush the top of the tongue
- ◉ Clean between the teeth with floss or interdental cleaner daily
- ◉ Power brushes and floss aids





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