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Oral Health Champions
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Congenital Heart Oral Health Maximization Project

Disty Pearson PA-C
Boston Adult Congenital Heart Service
ACHA - Orlando 2016
Endocarditis

- Infection of the inner lining of the heart
1st: Bacteria Gets Into Blood Stream
2nd: Bacteria travels in the blood through the body
3rd: Bacteria finds a place to settle
4th: Bacteria creates an infection - endocarditis
Sub Acute Bacterial Endocarditis
Symptoms

• Fevers and chills
• Poor appetite or unexplained weight loss
• Fatigue
• Aching joints and muscles
• Night sweats
• Shortness of breath ......
What to do?

- **Get Care:**
  - Call your caregivers or go to emergency room
  - Explain you have a heart defect/have had surgery....
  - Get blood cultures **BEFORE** they treat you

- **Treatment:**
  - Antibiotics
    - First “broad spectrum”
    - Then antibiotics specific for the bacteria
  - Possibly surgery
Prevention

Have the healthiest mouth you can!
Healthy Mouth

• Thin surface of mucosal epithelium prevents potentially pathogenic bacteria from entering the bloodstream and lymphatic system.

• Teeth and gums are bathed in saliva
  – Antimicrobial, cleansing activity controlling plaque & pH remineralization of tooth enamel using calcium and phosphates.
Transient Bacteremia

- 10-100% tooth extraction
- 36-88% periodontal surgery
- Up to 40% teeth cleaning

- 20-68% tooth brushing and flossing
- 20-40% wooden tooth pick use
- Chewing food 7-51%
American Heart Association New Guidelines

• Who: the AHA +
  – ADA Dental Association
  – Infectious Diseases Society of America
  – American Academy of Pediatrics
  • Additionally members of Rheumatic Fever, Endocarditis and Kawasaki Disease Committee of the AHA Council on cardiovascular Disease in the Young and national / international experts on infective endocarditis reviewed data on prevention of infective endocarditis.

• Approved 3/7/2007
Why Change?

1. Endocarditis more likely from frequent exposure to bacteria associated with daily activities than by procedures
2. Antibiotic prophylaxis may prevent very very small # cases
3. Risk of antibiotic-associated adverse events is worse than the benefit
4. **MAINTENANCE OF OPTIMAL ORAL HEALTH AND HYGIENE** may reduce the incidence of bacteremia from daily activities and is **MORE IMPORTANT** than antibiotics before a dental procedure to reduce the risk of endocarditis
Recommendations for Dental Prophylaxis

• In general: Cardiac conditions associated with the highest risk of adverse outcome from endocarditis
  – Prosthetic cardiac valve or prosthetic material used for cardiac valve repair
  – Previous endocarditis
  – Cardiac transplantation recipients who develop cardiac valvulopathy
  – Unrepaired cyanotic CHD, including palliative shunts and conduits
Recommendations for Dental Prophylaxis

- Repaired CHD with residual defects inhibiting endothelialization
  - At site of prosthetic patch/device
  - Adjacent prosthetic patch/device
- Completely repaired congenital heart defect with prosthetic material or device, whether placed by surgery or by catheter intervention during the first 6 months after the procedure
  - Endothelialization of prosthetic material occurs within 6 months after the procedure
If I Need Prophylaxis, When?

• All dental procedures that involve manipulation of gingival tissue or the peri-apical (top) region of teeth or perforation of the oral mucosa.

• When I don’t need it: dental X-rays, loosing of “baby teeth”, bleeding from trauma to the lips or oral mucosa.
If Prophylaxis, What?

• Discuss with your cardiology team!!!!

• General recommendations:
  – Pills: Amoxicillin: 2 gms 1 hour before procedure
    • Allergy to Penicillin: Cephalexin, clindamycin, azithromycin/clarithromycin
  – IM or IV: Ampicillin, Cefazolin or ceftriaxone.
    • Allergy to Penicillin: Cefazolin, ceftriaxone or clindamycin
Healthy Body and Mouth

“the mouth reflects general health and well-being”

David Satcher MD, PhD
Why is Oral Health Important?

Oral health is essential to overall health. Good oral health improves a person’s ability to speak, smile, smell, taste, touch, chew, swallow, and make facial expressions to show feelings and emotions.
Oral Health Problems

• Cavities
• Gum diseases
  – Gingivitis (red, swollen gums, bleed easily) periodontal disease
• Dry mouth (Xerostomia: not enough saliva/spit)
  – Medications (diuretics, blood pressure medicines)
  – Hormones, nutritional deficiencies, anxiety, depression, diabetes, blocked salivary gland
• Oral cancer
• Canker sores, cold sores
Importance of Oral Health

– Employed adults lose > 164 million hours of work/year with oral health problems or dental visits.
– Customer service industry employees lose 2 to 4 times more work hours than executives or professional workers
– 1 out of 20 middle-aged adults missing all teeth
– Tooth pain: interferes with
  • eating, swallowing and talking.
– Almost 1 out of 4 adults reported some form of facial pain the past 6 months
Easy Steps for Healthy Teeth

• Brush your teeth twice a day
  – Best after meals
  – Gently brush all sides of your teeth with a soft-bristled brush
  – Brush along the gum line
  – Round and short back-and-forth strokes
  – Lightly brush your tongue
Easy Steps for Healthy Teeth

• Floss your teeth at least once a day (have your dental hygienist show you the best way to floss)
• “Change your tooth brush every 3 months”
Easy Steps for Healthy Teeth

• Regular dental check ups twice a year (or per your dentist’s advice)
• See your dentist immediately if:
  – Your gums bleed often
  – Red or white patches on your gums, tongue, floor of mouth
  – Mouth/jaw pain
  – Sores that do not heal
  – Problems swallowing or chewing
Easy Steps for Healthy Teeth

• Healthy lifestyle affects your oral health
  – Healthy meals, limit soda
    • even diet soda can erode tooth enamel
  – Avoid snacking on sugary or starchy foods between meals
  – Fiber-rich fruits and vegetable stimulate saliva – remineralization of tooth surface

• Don’t use tobacco
  – Any kind: smoke or smokeless – chewing tobacco
  – Gum disease, oral and throat cancer, oral fungal infections, stains teeth, bad breath

• Limit alcohol
  – Oral and throat cancer
Oral Health and Heart Health

• Poor oral health (severe gum disease) is associated with the development of heart disease. (Inflammation)

• Dedicate 5 minutes a day to your heart health.
Mindfully Brushing Your Teeth

- If you brush your teeth mindfully you can also be “brushing your brain” it gives your brain a chance to rest and “sets a peaceful tone for the day ahead or the night ahead.”
  - Apply the toothpaste to your toothbrush.
  - Begin to brush. Breathe through your nose, slowly and deliberately.
  - Relax your neck and jaw.
  - Loosen your grip on the toothbrush. Feel the bristles moving over your teeth and the gums.
  - Taste the toothpaste.
  - As you rinse, breathe deeply through your nose. Notice your clean teeth.
  - Feel gratitude for your teeth and all that they allow you to do — chewing, smiling, speaking.

Dr. Fern White. Dentist in Australia
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The content is solely the responsibility of the authors and does not necessarily represent the official view of the NIIOH
Significant Findings
The First Cohort

• Lack of dental insurance was associated with recognition of pertinent findings on oral health exam (p=0.02)

• Lower levels of education and less than daily flossing were associated with receiving a referral for specialty dental care (p=0.10, p=0.04 respectively)

• COME SEE US IN THE RESEARCH ROOM
**Goals for Healthy Teeth**

Name: __________________________  Date of Visit: ________________________

The pictures checked are the areas you should focus on between today and your next visit.

- **Schedule a visit with your dentist**
- **Limit soda, Gatorade, energy drinks**
- **Limit candy & junk food**
- **Limit sugar added to food and drinks**
- **No tobacco products**
- **Healthy snacks such as fruit, carrot sticks, yogurt, low fat cheese, pretzels, whole grain crackers**
- **Drink fluoridated water**
- **Chew xylitol/sugar free gum**
- **Brush morning and before bed with at least a pea-size amount of fluoride toothpaste**
- **Daily flossing with floss string or pick**

**Visual condition of teeth**
- Unable to visualize teeth
- No teeth present
- No obvious caries/decay present
- Early signs of caries/decay (e.g. white/brown spots)
- Frank decay present
- Gum disease (Gingivitis, Periodontal disease)

**Clinician’s Comments:**

**Educational Materials Provided**

- Brushes/Paste/Floss