

Oral Health for your Healthy Older Adults

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Aging → Medically Complex Patients

- Have complex dental needs and require precise clinical dental skills
- Require knowledge of oral effects of medical conditions
- Prevention plays a greater role in avoiding dental breakdown

Oral Health Related QoL

- Functional & emotional well being
- Expectations & satisfaction with care
- OHRQoL –communicate relationship between oral diseases and QoL
- Helps develop evidence-based dentistry

Source: L Sischo and HL Broder. Oral Health-Related Quality of Life. J Dent Res. 2011 Nov; 90(11):1264-1270.

What is Aging?

“A series of progressive biologic and physiologic changes that impair one’s ability to adapt to stress.”

Source: Rowe, J and Besdine, R. Geriatric Medicine, 1988.

Living Beyond Age 65

| Age | Males | Females |
|-----|-------|---------|
| 70 | 89% | 93% |
| 75 | 75% | 83% |
| 80 | 56% | 69% |
| 85 | 36% | 50% |
| 90 | 18% | 29% |
| 95 | 6% | 12% |
| 100 | 1% | 3% |

Baby Boomers

- Bellwether for 21st C.
- 76 Million (1946-64)
- 25% college education
- Demanding
- Service oriented
- First fluoride generation
- First fully reconstructed generation

Successful Aging

- Engages with life
- Avoids disease
- Maintains high cognitive and physical function

Personality Counts

- 2359 healthy adults from NIA Baltimore Longitudinal Study
- People lived 2-3 years longer if they had above average scores for:
 - Emotional stability
 - Staying active physically & mentally
 - Conscientiousness

5 Life Lessons from Seniors

- The simple things matter most.
- Humor and time cure most pains.
- There's more satisfaction in giving than getting. Service to others is the most satisfying activity.
- Choose your spouse carefully. It will be your most important decision.
- Work hard and in a field or role that you enjoy.

Health changes frequently

Take vital signs at each appointment (HR, BP)

Ask patients every visit if their health has changed

Ask patients every visit if their medications have changed.

Salivary Substitutes

- Provide palliative relief from oral dryness
- Replace minerals in saliva
- Can use prn
- Contraindicated-alcohol-based mouthrinses
- Ingredients include:
 - ions: Na, Cl, Mg, F, Ca, Phosphates
 - flavoring: lemon, mint, neutral
 - lubricants/sweeteners-glycerin, sorbitol, xylitol
 - preservative-paraben enzymes

Root Caries in Older Adults

- More older adults
- More natural teeth
- More recession
- More risk factors
 - chronic illnesses
 - multiple medications
 - impaired abilities

Diagnostic Issues in Root Caries

- Identifying extent of lesion
- Progresses circumferentially around tooth
- Probing still necessary
- Restorative failures most likely to occur at apical margin

Treatment Issues in Root Caries

- Isolation procedures
- Restorative material selection
- Preparation design
- Post operative maintenance
- Prevention of lesions

Caries Management by Risk Assessment (CAMBRA)

- Caries is an infectious, transmissible disease process where in the presence of a cariogenic biofilm can cause demineralization of dental hard tissue
- Identify high risk/low risk patients
- Identify risk factors and educate patient
- Treatment plan to eliminate risk factors
- Implement preventive strategies
- Educate, educate, educate-patient, family, caregiver, friends, anyone who will listen.

Caries Risk Assessment

ADA Form
Available on ADA
website at ada.org

Free download
with guidelines for
use

| Caries Risk Assessment Form (Age >5) | | | | | | | | | |
|--------------------------------------|--|-------------------|----|-------------------|----|-------------------|----|---------------------|----|
| Patient Name: _____ | | Sex: _____ | | Date: _____ | | Age: _____ | | Patient Risk: _____ | |
| Risk Factor: _____ | | Risk Level: _____ | | Risk Level: _____ | | Risk Level: _____ | | Risk Level: _____ | |
| General Information | | | | | | | | | |
| 1 | Fluoride Exposure (through drinking water, toothpaste, professional fluoride treatments, etc.) | Yes | No | Yes | No | Yes | No | Yes | No |
| 2 | History of Bleeding Gums or Periodontitis (swollen, bleeding, or tender gums) | Yes | No | Yes | No | Yes | No | Yes | No |
| 3 | Caries (Cavities) of Molars, Premolars and/or Incisors (including root caries) | Yes | No | Yes | No | Yes | No | Yes | No |
| 4 | Periodontal Disease (inflammation of gum tissue) | Yes | No | Yes | No | Yes | No | Yes | No |
| Oral Hygiene Habits | | | | | | | | | |
| 5 | Brushing (at least twice daily) | Yes | No | Yes | No | Yes | No | Yes | No |
| 6 | Flossing (at least once daily) | Yes | No | Yes | No | Yes | No | Yes | No |
| 7 | Mouthwash (at least once daily) | Yes | No | Yes | No | Yes | No | Yes | No |
| 8 | Professional Cleaning (at least once a year) | Yes | No | Yes | No | Yes | No | Yes | No |
| Medical History | | | | | | | | | |
| 9 | Diabetes (Type 1 or 2) | Yes | No | Yes | No | Yes | No | Yes | No |
| 10 | Immunosuppressive Therapy (e.g., chemotherapy, radiation, steroids) | Yes | No | Yes | No | Yes | No | Yes | No |
| 11 | Medications (including antibiotics, antacids, etc.) | Yes | No | Yes | No | Yes | No | Yes | No |
| 12 | Smoking (at least once a day) | Yes | No | Yes | No | Yes | No | Yes | No |
| 13 | Alcohol Consumption (at least once a week) | Yes | No | Yes | No | Yes | No | Yes | No |
| 14 | Oral Cancer (at least once a year) | Yes | No | Yes | No | Yes | No | Yes | No |
| 15 | Head and Neck Cancer (at least once a year) | Yes | No | Yes | No | Yes | No | Yes | No |
| 16 | Immunosuppressive Therapy (e.g., chemotherapy, radiation, steroids) | Yes | No | Yes | No | Yes | No | Yes | No |
| 17 | Medications (including antibiotics, antacids, etc.) | Yes | No | Yes | No | Yes | No | Yes | No |
| 18 | Smoking (at least once a day) | Yes | No | Yes | No | Yes | No | Yes | No |
| 19 | Alcohol Consumption (at least once a week) | Yes | No | Yes | No | Yes | No | Yes | No |
| 20 | Oral Cancer (at least once a year) | Yes | No | Yes | No | Yes | No | Yes | No |
| 21 | Head and Neck Cancer (at least once a year) | Yes | No | Yes | No | Yes | No | Yes | No |
| 22 | Immunosuppressive Therapy (e.g., chemotherapy, radiation, steroids) | Yes | No | Yes | No | Yes | No | Yes | No |
| 23 | Medications (including antibiotics, antacids, etc.) | Yes | No | Yes | No | Yes | No | Yes | No |
| 24 | Smoking (at least once a day) | Yes | No | Yes | No | Yes | No | Yes | No |
| 25 | Alcohol Consumption (at least once a week) | Yes | No | Yes | No | Yes | No | Yes | No |
| 26 | Oral Cancer (at least once a year) | Yes | No | Yes | No | Yes | No | Yes | No |
| 27 | Head and Neck Cancer (at least once a year) | Yes | No | Yes | No | Yes | No | Yes | No |
| 28 | Immunosuppressive Therapy (e.g., chemotherapy, radiation, steroids) | Yes | No | Yes | No | Yes | No | Yes | No |
| 29 | Medications (including antibiotics, antacids, etc.) | Yes | No | Yes | No | Yes | No | Yes | No |
| 30 | Smoking (at least once a day) | Yes | No | Yes | No | Yes | No | Yes | No |
| 31 | Alcohol Consumption (at least once a week) | Yes | No | Yes | No | Yes | No | Yes | No |
| 32 | Oral Cancer (at least once a year) | Yes | No | Yes | No | Yes | No | Yes | No |
| 33 | Head and Neck Cancer (at least once a year) | Yes | No | Yes | No | Yes | No | Yes | No |
| 34 | Immunosuppressive Therapy (e.g., chemotherapy, radiation, steroids) | Yes | No | Yes | No | Yes | No | Yes | No |
| 35 | Medications (including antibiotics, antacids, etc.) | Yes | No | Yes | No | Yes | No | Yes | No |
| 36 | Smoking (at least once a day) | Yes | No | Yes | No | Yes | No | Yes | No |
| 37 | Alcohol Consumption (at least once a week) | Yes | No | Yes | No | Yes | No | Yes | No |
| 38 | Oral Cancer (at least once a year) | Yes | No | Yes | No | Yes | No | Yes | No |
| 39 | Head and Neck Cancer (at least once a year) | Yes | No | Yes | No | Yes | No | Yes | No |
| 40 | Immunosuppressive Therapy (e.g., chemotherapy, radiation, steroids) | Yes | No | Yes | No | Yes | No | Yes | No |
| 41 | Medications (including antibiotics, antacids, etc.) | Yes | No | Yes | No | Yes | No | Yes | No |
| 42 | Smoking (at least once a day) | Yes | No | Yes | No | Yes | No | Yes | No |
| 43 | Alcohol Consumption (at least once a week) | Yes | No | Yes | No | Yes | No | Yes | No |
| 44 | Oral Cancer (at least once a year) | Yes | No | Yes | No | Yes | No | Yes | No |
| 45 | Head and Neck Cancer (at least once a year) | Yes | No | Yes | No | Yes | No | Yes | No |
| 46 | Immunosuppressive Therapy (e.g., chemotherapy, radiation, steroids) | Yes | No | Yes | No | Yes | No | Yes | No |
| 47 | Medications (including antibiotics, antacids, etc.) | Yes | No | Yes | No | Yes | No | Yes | No |
| 48 | Smoking (at least once a day) | Yes | No | Yes | No | Yes | No | Yes | No |
| 49 | Alcohol Consumption (at least once a week) | Yes | No | Yes | No | Yes | No | Yes | No |
| 50 | Oral Cancer (at least once a year) | Yes | No | Yes | No | Yes | No | Yes | No |

Risk Assessment for Root Caries

Low Risk

- No active caries
- No risk factors

High Risk

- Active caries
- Multiple risk factors
- No caries but risk factors

Evidence Based Fluoride Usage

Professionally applied topical fluoride Evidence-based clinical recommendations

American Dental Association Council on Scientific Affairs

Editor's note: This summary of three topical fluoride recommendations based on this issue of JADA, after page 1120.

Diffusion of evidence-based dentistry. The American Dental Association defines the term "evidence-based dentistry" as follows: Evidence-based dentistry (EBD) is an approach to oral health care that requires the judicious integration of systematic assessments of clinically relevant scientific evidence, arising from the research on oral health care and history, with the dentist's clinical expertise and the patient's treatment needs and preferences.

In adopting this definition, the EBD, the American Dental Association recognizes that treatment recommendations should be based on:

ABSTRACT

Background: With the dramatic increase in the amount of scientific information available about dental health, an evidence-based approach to oral health care and the practice of dentistry is necessary. There is a need to summarize, critique and disseminate scientific evidence and to translate the evidence into a practical format that is used widely by dentists. The evidence-based clinical recommendations in this report were developed by an expert panel established by the American Dental Association Council on Scientific Affairs that evaluated the collective body of scientific evidence on the effectiveness of professionally applied topical fluoride for caries prevention. The recommendations are intended to assist dentists in clinical decision-making.

Types of Studies Reviewed: MEDLINE and the Cochrane Library were searched for systematic reviews and clinical studies of professionally applied topical fluoride—including gel, foam and varnish—through October 2005.

Results: Fluorides were selected on the basis of their evidence in the evidence-based practice. The recommendations are stratified by age groups and caries risk and indicate that fluoride fluoride treatments should be considered for both children and adults who are at moderate or high risk of developing caries. Included in the clinical recommendations

Caries Prevention Strategies for High Risk Patients

■ Self-Care

Fluoride dentifrice 3x daily
Interproximal cleaning
once/day
1.1% neutral sodium
fluoride (gel or toothpaste)
Chlorhexidine rinse for 1
week every month, or 2
wks, q3-6 months
Xylitol chewing gum

■ Professional Care

Fluoride varnish applied q
3-6 months
More frequent recall
intervals (2-3 months)
Sealants, if applicable
Bacteriologic monitoring
Diet counseling

Periodontal Treatment

- Scaling and root planing - PRN
- Based on patient medical, psychological, oral health needs

Cardiovascular Diseases (CVD)

- High blood pressure
- Heart attack
- Congestive Heart Failure
- Atrial Fibrillation
- Electrical System Defects
- Valvular Defects

CVD & Periodontal Infections

Evidence still developing about the relationship between periodontal infections and cardiovascular disease.

- Will randomized clinical trial ever be conducted to determine?
- Will periodontal treatment ever be required as part of the management of CVD?

Source: R. Demmer and M. Desvarieux. Periodontal infections and cardiovascular disease. JADA 137: 14s-20s, Oct 2006.

P. Lockhart et al. Periodontal Disease and Atherosclerotic Vascular Disease: Does the Evidence Support an Independent Association? A Scientific Statement From the American Heart Association. Circulation. 2012; published online before print April 18, 2012.

General Approach for CVD Patient

- Physician consult
Contact the patient's physician if any question
- Understand meds & oral side effects
Bleeding, gingival overgrowth
- If hypertensive, check BP at each dental visit
Required by some dental practice acts (Texas)
- Manage specific CVDs as required

Patient with Conduction System Defects

- Medications for Atrial Fib.
Plavix®, Effient®
- Pacemaker
has life expectancy, may need to be replaced
- Implanted Defibrillator
monitors rhythm and administers current

Cardiovascular Implantable Electronic Devices (CIED)

- Risk factors for infection include:
 - Immunosuppression (renal/corticosteroid use)
 - Oral anticoagulation use
 - Patient coexisting illness (diabetes)

Source: Baddour L et al. A summary of the update on cardiovascular implantable electronic device infections and their management. JADA 142(2):159-165, Feb 2011. (reprinted from Circulation, 2010)

Cardiovascular Implantable Electronic Devices (CIED)

- Literature review of 140 articles (1950-2007) found no reports of "hematological infection from dental, gastrointestinal, GU, dermatologic or other procedures."
- "Antimicrobial prophylaxis is not recommended for dental or other invasive procedures not directly related to device manipulation to prevent CIED infection."

Source: Baddour L et al. A summary of the update on cardiovascular implantable electronic device infections and their management. JADA 142(2):159-165, Feb 2011. (reprinted from Circulation, 2010).

CARDIAC CONDITIONS FOR WHICH PROPHYLAXIS FOR DENTAL PROCEDURES IS RECOMMENDED FOR PREVENTION OF BACTERIAL ENDOCARDITIS

- Prosthetic Cardiac Valve
 - Previous Infective Endocarditis
 - Congenital Heart Disease (CHD)
 - Un-repaired cyanotic CHD, including palliative shunts and conduits
 - 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 occurs within 6 month of procedure)
 - Repaired CHD with residual defects at the site or adjacent to the site of a prosthetic patch or prosthetic device (which inhibits endothelialization)
 - Cardiac transplant recipients who develop cardiac valvulopathy
- *Except for the cardiac conditions listed above, antibiotic prophylaxis is no longer recommended for any cardiac condition or problem.

Source: Current American Heart Association Guidelines
Published May 8, 2007, *Circulation*, Vol. 115.

Prevention of Bacterial Endocarditis

Standard Regimen

- Adults and Children > 60#
Amoxicillin, 500 mg. (4 tabs)
2.0 g orally 1 h before procedure:
No follow-up dose

Prevention of Bacterial Endocarditis

Amoxicillin/Penicillin Allergic Patients

- Clindamycin, 150 mg. (4 tabs)
600 mg p.o. 30-60 min. preop
- Cephalexin or Cefadroxil, 500 mg. (4 tabs)
2.0 g p.o. 30-60 min, preop

*Cephalosporins should not be used in individuals with immediate-type hypersensitivity reaction (urticaria, angioedema, or anaphylaxis) to penicillins.

Prevention of Bacterial Endocarditis

Amoxicillin/Penicillin Allergic Patients

- Azithromycin, 250 mg. (2 tabs)
500 mg p.o. 30-60 min. preop
- Clarithromycin, 250 mg. (2 tabs)
500 mg p.o. 30-60 min, preop

“Application of chlorhexidine may be used as an adjunct to antibiotic prophylaxis, particularly in patients who are at high risk and/or have poor dental hygiene.”

Dajani, AS et al, Prevention of Bacterial Endocarditis. Recommendation of the American Heart Association. JAMA 264:2919-2922, Dec. 12, 1990.

Treatment of MRONJ

- Do not debride-lesion only gets larger
- Antibiotics-Amoxicillin or Levaquin for 10 days
- Good daily hygiene and chlorhexidine daily rinse
- Counsel patient that you can manage this oral side effect, while the patient manages their cancer therapy.

Strategies for Patients taking Bisphosphonates

- Take a good history
 - Oral bisphosphonates < IV Bisphosphonates
 - Oral bisphosphonates < 3 yrs
- Treatment Planning
 - Informed Consent
 - Tooth Conserving procedures (endo v. extraction)
- Prevention
 - Good oral hygiene
 - Regular dental visits
 - Consult with patient's oncologist

Oral Cancer, US

- ~28,000 new cases each year, US
- One half will die within 5 years of diagnosis
- 1 out of 4 have no risk factors for oral cancer
- New diagnostic aids for improved detection

Risk Factors for Oral Cancer

- Tobacco use
- Alcohol use
- Age
- Sunlight (lip cancer)
- HPV-16

Preventive Strategies for Oral Cancer

- Tobacco Cessation
- Early Diagnosis
- Self-examination

Resources for Medically Compromised Older Population

- Epocrates or Lexi-comp– any software program with drug info for PDA
- Dental Therapeutics, 3rd edition, ADA Publishing, (\$48.95)
- Medical Considerations for Dental Practice, Quintessence (\$98.00)
- Little and Falace, Dental care for the medically compromised, Mosby

Conclusions

- Oral health can be maintained throughout a lifetime.
- It requires greater effort by patients, their families, caregivers and dental professionals!
- Good oral health contributes to older adults quality of life.