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ONLINE CONTINUING EDUCATION FOR THE LIFE OF YOUR CAREER

Dentition: Oral Health, Hygiene and the Swallow (Part 2)

Denise Dougherty, MA, CCC-SLP

Moderated by:
Amy Hansen, MA, CCC-SLP, Managing Editor, SpeechPathology.com

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CONTINUED

Part Two:

- Mouth care – in many facilities – is lacking or spotty at best. Poor saliva, oral bacteria and poor mouth care creates health issues and puts our patient's health at risk.
- Staff are poorly educated on the rationale for mouth care AND how to do it!
- ***Part Two*** of this seminar will address the importance of mouth care, help you formulate talking points to educate your staff, identify the "how – to" for mouth care and provide resources to utilize to develop a mouth care protocol.

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CONTINUED

Learning Objectives Part Two

- Identify three health risks that are related to poor oral care.
- Identify talking points for educating staff on the benefits of mouth care.
- Describe the components of an evidence-based mouth care protocol.

9

CONTINUED

Part Two!

- Why Oral Hygiene?
  - Health Risks!
- Mouth Care
  - Teeth and Tongue
- How to!
  - Mouth Care Protocols

AGENDA

10

Why Mouth Care?

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Concerns!

- Chart review!
  - Disorders
  - Disease processes
  - Medications
- Dentition
  - Dentures?
  - Own teeth?
  - Condition!
- Medications cause or exacerbate
  - Xerostomia
  - Excess secretions
  - Mouth ulcers, stomatitis
  - Thrush

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CONTINUED

Drugs Treating These Conditions Potentially Cause Xerostomia (1)

- Anxiety
- Asthma
- Bipolar
- Blood pressure
- COPD
- Circulation
- Depression
- Diarrhea
- Fluid retention
- Heart failure
- Heartburn
- Pain
- Parkinson's
- Restless leg
- Schizophrenia
- Spasticity
- Vomiting
- Nausea

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CONTINUED

Drugs Treating These Conditions Potentially Cause (1)

Increased Secretions

- Anxiety
- Circulation
- Schizophrenia

Dysphagia

- Asthma
- Bipolar
- Blood pressure candidiasis
- Diabetes
- Diarrhea
- Fluid retention
- Fungal infection
- Osteoporosis

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Drugs Treating These Conditions Potentially Cause Mouth Ulcers, Thrush, Esophageal Ulcers

- Arthritis
- Asthma
- Bipolar
- Cancer
- COPD
- Constipation
- Depression
- Diarrhea
- Heartburn
- CNS infection
- Inflammatory disease
- Lupus
- Osteoporosis

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Connection between occlusion and human brain function (2)

- Mastication may be
  - considered a mild and lifelong daily exercise
- Forceful chewing may be beneficial to pts w cognitive impairments
  - might help reduce wt. loss in cognitively impaired pts
- Rhythmic jaw movements stimulate activity in cerebral cortex
  - Increase cerebral blood flow
  - Activate parts of the cortex
  - Increase blood oxygen levels in prefrontal cortex and hippocampus – may play role for learning and memory performance
  - **Possibility to prevent decline in brain function by improving masticatory function**
- **May alleviate mucosal inflammation, diminish risk of caries, increase lubrication of bolus for swallow** and taste sensation

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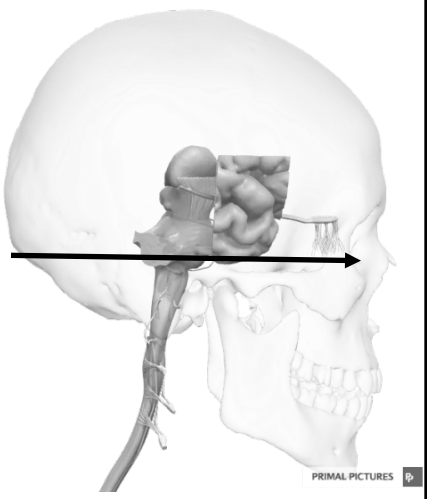
CONTINUED

Diabetes and Oral Health (3)

- Periodontitis - Systemic inflammatory response from inflamed periodontal tissue
  - exacerbates diabetes
  - worsens cardiovascular outcomes*
    - Connection between cardiovascular disease and decreased size of olfactory bulb in brain!
    - Decreases sense of smell!
  - increases mortality
- Severe periodontal disease leads to tooth loss
  - Poor control of diabetes
  - Increased duration of diabetes



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CONTINUED

Chronic complications of diabetes – oral health! (3)

Perioral diseases
- Gingivitis
- Periodontitis
- Xerostomia
- Candidiasis
- Oral cancer

Oral lichen planus
- Chronic inflammatory condition
- Affects oral mucous membranes
- Long lasting disease
- Bilateral white striations, open sores, plaques on buccal mucosa, tongue and gingiva
- Significant pain w oral intake

Leucoplakia
- Firmly attached white patch on mucous membrane
- Increased risk of cancer
- Can't be scraped off
- Usually associated w tobacco use

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CONTINUED

Oral Pathogens and Increased Risk of Esophageal Cancer! (4)

- Abundance of periodontal pathogen (porphyromonas gingivalis) trended w **higher risk of esophageal squamous cell carcinoma**
- Significant predictors of increased risk of precancerous lesions of gastric cancer (PLGC)
  - ***Not flossing regularly***
  - ***Higher prevalence of bleeding on probing***
  - ***Elevated colonization w periodontal pathogens*** (5)

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CONTINUED

Pulpal Necrosis or Pulp Death! (6)

- Death of pulp w low grade inflammation around apex of tooth root overlooked by medial team
  - Pt. becomes frailer, less resilient and more belligerent
  - defensively aggressive, refuses to speak, eat or cooperate
- Painful!
  - remains undetected when communicative disorders mask source/extent of suffering
- Caries in frail elderly seriously threatens health and QOL
  - Might be more life threatening than generally known

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Oral Health in LTC Facilities (7)

Oral health generally very poor

- Chronic gingivitis
- Caries
- Missing teeth
- Chewing difficulties
- Discomfort & pain

- Widespread malnutrition in frail elders
- Studies report assoc. between candida albicans and denture stomatitis (12)

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- Aspiration pneumonia risk significantly increased by
  - decayed teeth
  - presence of bacteria in saliva
- Need to balance increased risk of decay vs. need for meds and high calorie food supplements w sucrose to maintain nutritional status (8)

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Oral Care for Institutionalized Elderly is Essential Component of Holistic Care! (8)

- Affects general health and personal well-being
- Oral disease causes pain & suffering w significant morbidity
- Lack of pain does not mean free from disease or infection
  - Sensitive to hold/cold
- Periodontal disease present for yrs. yet be **relatively asymptomatic**

Teeth

- Affect quality of life
- Helps mastication of healthy diet
- Important for communication, socialization and appearance

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Oral Health Care (9)

- Diminished risk of/dying from aspiration pneumonia in care home residents
  - Risk factor for aspiration is bad oral health
- Potential respiratory pathogens found in oral plaque of frail older people
- Assistance w oral health care **after each meal** may reduce risk 2◦ improved swallow reflex
- Cough reflex sensitivity at 30 days was **significantly higher when oral care done!**

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CONTINUED

Mouth care

- Improved hygiene/frequent professional oral health care reduced AP **40%** in high risk elderly
- Oral hygiene removes dental plaque (reservoir of potential respiratory pathogens) (13)
- Intensive oral care may reduce AP by **improving cough reflex sensitivity** in elderly NH pts. (11)
- Poor oral health impacts taste
- Increased bacterial growth assoc. w impaired taste (10)

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Variables influencing risk of aspiration pneumonia directly (9)

- Salivary substance P
  - mediates swallowing and cough reflex
  - ACE inhibitors stimulate production of substance P
- Cough reflex sensitivity
- Levels of oropharyngeal pathogens

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CONTINUED

Older individual's ability to perform good oral hygiene reduced by cognitive, visual and physical impairment

Oral health relies on
- good plaque removal
- low sugar diet
- adequate salivary flow

Good plaque control relies on
- fine motor skills
- adequate vision
- motivation (8)

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CONTINUED

Plaque (9)

- Sticky layer of bacteria
- Forms on all oral structures ***within minutes of being removed***
- In all mouths **including** NPO pts.
- Hardens and becomes tartar or calculus
- Removed w scaling instruments
- Mouth care **2 x day** should be in plan of care

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Tooth Loss and Oral Function (8)

- Leads to predominantly soft easy to chew foods**
  - Decreased stimulation of saliva 2◦ less chewing
  - Nutrient density of pureed food reduced 2◦ addition of liquid
  - Must consume greater volumes of energy diluted food to meet needs
  - High tongue driving force and increased pharyngeal pressure required to effectively clear very thick bolus from pharynx
- Reduced oral function may result in
  - restricted food selection
  - reduced nutritional benefit
  - wt. loss
  - dehydration

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Fungal Infection (8)

- Candida species
- Cause inflammation
  - especially under upper denture
  - red looking palate.
- Cause angular cheilitis
  - Red cracks at corners of mouth which can be crusted
  - Saliva collecting at corners of mouth can exacerbate condition
- Candida infections treated w antifungal cream – miconazole

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CONTINUED

Ulcers (8)

- Causes include trauma of any oral soft tissue
- Asymptomatic to extremely painful
  - NSAIDS for oral pain
- Usually heal within 2 wks.
- May be sign of underlying deficiency/disease
  - Iron deficiency
  - Upper or lower GI tract
  - Cancer
- Chlorhexidine mouthwash accelerates healing
- Carmellose sodium paste creates protective layer, useful in recurrent ulcers (orabase)

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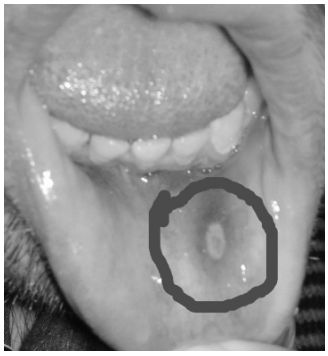
CONTINUED

Stomatitis

Wikimedia Commons



- Denture stomatitis
  - common oral mucosal lesion
- Common in elderly
  - Reduced oral & denture hygiene
- Risk w age-related chronic disease
  - type 2 diabetes mellitus
  - Drugs - Flagyl
  - age-associated immunocompromise
- Contact sensitivities to denture material
- Side effect of cancer tx

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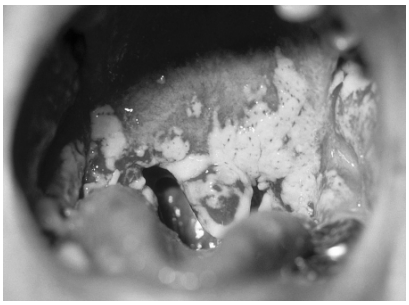
- Decreased taste, bad taste
- infection of buccal cavity
  - yeast overgrowth
  - antibiotics, steroids, immune dysfunction
- common in poorly nourished populations
- fluconazole or oral nystatin suspension
  - Swish & swallow
  - Failure to do provides ineffective tx for lesions in posterior pharynx, esophagus.

Thrush Wikimedia Commons



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Mouth Care!

It's not JUST the TEETH!

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CONTINUED

Healthy Adult Mouth (8)

- Clean teeth, no decay and minimal plaque
- Intact fillings w no trauma to tongue or cheek
- Pink, firm gums/gingiva –not red and loose
  - Bleeding gums indicates of gum problems
- Dentures – partial or complete – clean w no rough edges
- Pink tongue and even texture w no ulcers
- Pink, smooth, moist mucosa and free from ulcers
- Assess lumps or suspicious areas such as white, red speckled patches, mouth ulcers present longer than 2 wks. ASAP

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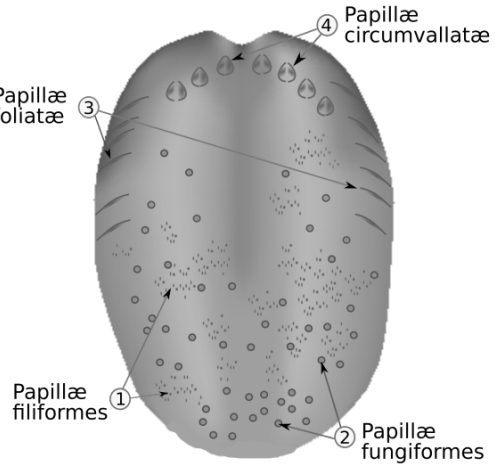
CONTINUED

Tongue and mouth care

- Can't taste w coated tongue
- Papillae trap bacteria, dead skin cells, food particles
- Cause bad breath, white discoloration of tongue
- Tongue bacteria redeposits on teeth/gums after cleaning
- Increased plaque, tartar buildup on teeth
- Tongue most common source of bad breath



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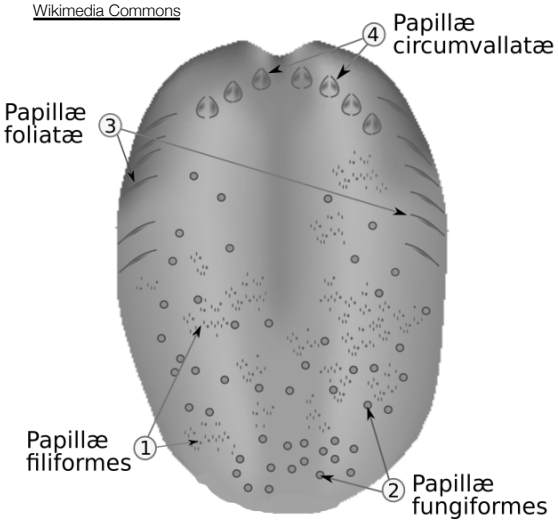
Papillae:

- House taste buds
- Area of contact/friction w food

Helps tongue

- manipulate bolus
- position food between teeth during chewing

Wikimedia Commons



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Tongue Coating and Lingual function!

- Correlation between **amt.** of tongue coating & **reduced lingual function**
- Tongue coating = Micro-organisms, food residues, abrasive epithelia
- **Motor function of tongue, lips & saliva secretion decrease w aging & have effect on build up of tongue-coating**
- Possible reduction of coating by functional training of tongue. (32)

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Rinsing mouth?

- Biofilm sticks to surface of tongue
- Rinsing w mouth rinse, only destroys outer cells of biofilm
- Cells beneath surface still active

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Dry Mouth (8)

Saliva has
- protective function
- lubricates oral cavity
- prevents trauma
- dilutes & neutralizes pH of oral cavity to protect tooth surface

Altered rates of salivary flow normal throughout day

Dehydration = reduced saliva
- Xerostomia is symptom of Sjogren's syndrome (autoimmune condition)
- Radiation involving salivary glands
  - substantial damage to gland tissue

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CONTINUED

Dry Mouth (8)

Reduced salivary flow common side effect of meds

- Antihypertensives
- Antidepressants
- Diuretics

30% of 65 yr. olds have xerostomia and salivary gland hypofunction

- unpleasant and uncomfortable
- difficulty speaking, swallowing, eating
- leads to malnutrition and wt. loss
- makes denture wearing awkward
- increases risk of dental decay

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CONTINUED

Saliva Substitutes (8)

Gels placed on tongue and spread around mouth

- Mouth more comfortable, helps w wearing dentures
- Frequent sips of water encouraged
  - helps w speaking, eating, swallowing
- Refrain from sucking sweets (unless sugar free) or consuming drinks containing sugar
  - detrimental to integrity of any natural teeth

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- Alcohol
  - help kill bacteria/ germs that contribute to tooth decay & bad breath
  - Avoid if dx w xerostomia
- Detergents
  - dislodge/remove food debris, loose plaque
- Flavor
  - Flavors/colors improve look and taste
- Preservatives
  - Prevent growth of bacteria in mouthwash
- Water
  - Dissolve other ingredients
- Fluoride
  - Make teeth more resistant to acid, help defend against tooth decay

Mouthwash Ingredients

- Salt water
  - Natural mouthwash
  - Natural disinfectant
  - Helps w mouth ulcers or infections
  - Avoid long term use – eats away/softens enamel
  - Predisposes teeth to chipping and cavities

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Mouth Rinses (12)

- Nystatin and chlorhexidine gold standard antimicrobial mouth rinses
- Nystatin effective against candida w/out side effects or fungal resistance since 1951
  - Treats oral, gi and esophageal candidasis
  - Not absorbed by GI tract, skin or mucosae
  - Low risk of toxicity – IV administration considerably toxic
  - Restricted to superficial infections
  - Gel preferred formulation for head/neck cancer pts

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Chlorhexidine (12)

- Used since 1940
- 30% of active component remains in oral mucosa after single use
- Forms sulphides
  - gives tooth surface and tissues dark brownish color
- Temporary side effects
  - Dysgeusia (foul, salty, rancid or metallic taste sensation)
  - burning sensation
- Not metabolized and excreted via feces
- Should not use w nystatin
- Problems when combined w other substances such as
  - fluoride and sodium lauryl sulphate found in dentifrice (toothpastes etc.)
- Wait 30 minutes between mouth rinse and toothpaste use
- NOT effective w gastrointestinal candidiasis

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NPO Patients (8)

- Plaque buildup
  - Mouth becomes stagnant
- Too sore to brush
  - gauze or sponge sticks soaked in water or chlorhexidine .2% or diluted if feels too sharp
- If brushing tolerated
  - use small headed manual brush and non-foaming toothpaste
- Fluid in mouth kept to absolute minimum and remove to prevent choking/aspiration

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NPO Patients (8)

- Clean dry/cracked lips w water moistened gauze
  - protect w aqueous skin cream
- Cleaning tongue 1x day for 2 wks. w tongue brush immersed in mouthwash
  - Decreased # of anaerobic bacteria in mouth
- Mouthwash more effective for cleaning tongue in dry mouth of elders w tube feeding (14)

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Dental treatment w frailty (17)

- Very time consuming
- Success depends on special attention to psychosocial influences on health and illness
- Rely on frailty as a health marker rather than chronological age when considering dental treatment
- Frail individuals have health issues that need consideration in addition to cognitive changes and limited life expectancy

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CONTINUED

Questions BEFORE Treatment!! (17)

- Will treatment reduce pain/discomfort
- Can it be provided safely
- Will it improve QOL?
- In cognitively impaired pt.
  - Sedation for safe delivery of care
  - is treatment worth risk of morbidity/mortality assoc. w sedation?
- Confident treatment provided, pt. will remain symptom free for remaining years of life?
- Does pt./POA FULLY understand benefits/burdens assoc. w treatment vs. no treatment?

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CONTINUED

How To's and Protocols

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Resources and Protocols

- **Mouth Care Guides and Forms**
  - Bissett, S., & Preshaw, P. (2011). Guide to providing mouth care for older people. Nursing Older People, 23(10), 14-21.
- **Oral Health Assessment Tool**
  - www.healthcare.uiowa.edu/igec/tools/oralhealth/OHAT.pdf
- **Oral Health Screening Tool for Nursing Personnel – OHSTNP**
  - Based on Oral Health Assessment Tool – OHAT
- Forms to Document Oral Care For the Nursing Home Patient
  - Instructions – CNA's & Nurse Supervisors, AM/PM Checklist, Weekly Assessment
  - Pace, C. C., & McCullough, G. H. (2010). The association between oral microorgansims and aspiration pneumonia in the institutionalized elderly: review and recommendations. *Dysphagia*, *25*(4), 307-322.

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Xerostomia Handouts

- English - http://www.nidcr.nih.gov/oralhealth/Topics/DryMouth/Documents/DryMouth_082714_508C.pdf
- Spanish - http://www.nidcr.nih.gov/oralhealth/Topics/DryMouth/Documents/drymouth_sp.pdf

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Oral Health Screening Tool for Nursing Personnel – OHSTNP
(18)

Based on Oral Health Assessment Tool – OHAT

- Assists LTC nursing staff without preliminary training in identifying residents in need of dentist referral
- Reliable and valid for screening natural teeth, denture conditions and oral functions
- Takes between 144 and 202 sec.
  - ½ the time required for OHAT
- Time reduced if assistant available to record scores

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ASSESSMENT INCLUDES:
(18)

- Lips
- Tongue
- Gums and tissues
- Saliva
- Natural teeth conditions
- Denture conditions
- Oral cleanliness
- Tongue protrusion beyond lower lip
- Cheek puffing test
- Articulation
- Oral intake - reported by resident & staff
- Coughing during meals - reported by resident & staff

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CONTINUED

Best Intervention to reduce incidence of aspiration pneumonia**?** (9)

Literature review – **best intervention:**

- **Tooth brushing** after each meal
- **Cleaning dentures** once a day
- **Professional oral health** care once a week
  - Dentists or dental hygienists

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CONTINUED

- **Knowledge and attitudes** of caregivers are **integral** to delivery of oral care
- Barriers to providing effective oral care
  - **Low priority – seen as burden**
  - **Excessive workload – limited staff**
  - Psychological distress at working inside another person's mouth
  - Busy nursing staff lacking sufficient time (8)
- Factors affecting efficacy of caregiver intervention in oral hygiene:
  - Lack of knowledge
  - Relationship between caregivers lack of knowledge and motivation
  - Need for education session (13)

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Nurses/Aides and Mouth Care Education (7)

- Typically lectures or seminars presented by visiting dental personnel
- Studies showed benefits noted were usually short-lived
- Organizational structure in LTC long facilities and labor relations between administrators, nurses and care-aides in many facilities harbor hidden values and assumptions

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Risk related burden plays important role in oral health related caregiver burden

- More difficult to perform oral care for elders requiring care than healthy people
- Reluctance to give oral care
  - lack of cooperation by elders, client not opening mouth
- Inappropriate oral care because of insufficient time for practice, difficulty in accessing the mouth etc.

Consider oral health care assistants (15)

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Oral Health Caregiver Burden Index (15) **0 = never, 4 nearly always**

- I have no time to provide oral care services – **technique burden**
- My body aches when brushing – **technique burden**
- I want to delegate oral care to someone else – **technique burden**
- I experience hardship because caregiving does not give me a sense of "satisfaction" – **existential burden**
- I feel endangered when brushing for senior citizens – **risk related burden**
- I don't know what to do about oral care on assistant – **technique burden**
- I feel uncomfortable because of unpleasant oral appearance and odor when brushing – **service related burden**
- I have a hard time because patients resent receiving oral care – **service related burden**
- Overall, how much burden do you think providing oral health care is to you – **overall burden**

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Cleaning Tongue

Brushing

- Toothbrush or tongue brush
- Gently scrub from back to tip w moistened toothbrush
- Do after brushing
  - Toothpaste residue still in mouth

Scraping

- Scraping surface takes off tongues' layer of mucus, bacteria and trapped debris
- Scraper at back of tongue & slide to tip
- Rinse and repeat
- Prior to brushing teeth

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- **Toothette® does not remove plaque -** brushing better

Mouth care (28)

- Studies: (412 residents)
  - **70%+ not seen dentist in 5+ yrs.**
  - **22%** reported dental problem
  - **82%** unable to clean dentures
  - **64%** Staff cleaned denture
  - **95% dentures unhygienic**
  - **33% stomatitis***
  - Pts w teeth – **75%** unable to do mouth care
  - **0% received assistance**
  - ⅔ tooth surface covered in plaque
  - Calculus in **82%** & cavities in **63%**

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Procedures before helping w oral care

- Plastic apron, gloves, protective eye wear
- ORAL CARE PLAN
- Inspect lips, mouth, teeth using flashlight
- Presence/absence of saliva, natural teeth, dentures, condition of dentures, standard of oral hygiene
- Complete risk assessment form (Bissett, pg. 18)
- Completion of daily oral care sheet
- Regular reassessment! (8)

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Care of Natural Teeth (8)

- Brush after breakfast and before sleep
  - How to brush teeth (Bissett, page 20)
  - More difficult to brush own teeth if stroke, arthritis, Parkinson's, dementia
- Modify toothbrush w built up handle
  - Electric toothbrush easier to hold
  - Electric toothbrush w rotation oscillation more effective in reducing plaque and gingivitis (20)
  - Reduces muscle fatigue
- Optimal plaque removal not always possible
  - protective benefits of fluoride and chlorhexidine!
  - Toothbrush removes plaque but sometimes not possible to brush 2◦ discomfort or lack of compliance
- Applying fluoride toothpaste topically w sponge applicator will go some way to protect teeth despite layer of plaque.
  - High strength fluoride toothpastes available on prescription

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Poor denture cleanliness (16)

Permits
- micro-organism proliferation
- denture plaque formation assoc. w denture derived stomatitis

Denture adhesives used to
- improve comfort and function of dentures by increasing retention and stability

Cream and powder adhesives
- become viscous by absorbing saliva
- spreads between alveolar ridge and mucosal surface of denture
- leave residue that is difficult to remove from denture undersurface
- residue limits effectiveness of daily cleaning, providing breeding ground for bacteria

Cushion adhesives fill gap between denture and oral mucosa to enhance fit
- damage oral mucosa and cause resorption of alveolar bone
- create impaired occlusion

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CONTINUED

Denture Care (8)

- Moist dentures easier to remove
  - sip of water before removal
- Lift/rotate lower denture to remove one side, then the other
- Remove by gently rocking upper denture to break seal
- Reinsert, rotating back into place – moist dentures insert easier
- Reapply fixative after cleaning
- Regular removal/reapply new fixative especially important if oral fungal infections
- Soak 1 x day **min. of 20 minutes** – ideal time is overnight
- Plastic dentures – recommend diluted sodium hypochlorite, proportions used to sterilize baby bottles
  - Soak then place in cold water overnight, rinse before use
- Hot water rinse can bleach pink areas of dentures

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CONTINUED

Conclusions of 5 intervention studies (9)

- Assistance w oral care after each meal assoc. w significant decrease in swallowing latency time
  - suggests reduced aspiration pneumonia risk
- Care providers clean mouth 5 min after each meal = significantly improved cough reflex sensitivity
  - suggests reduced aspiration pneumonia risk
- **Assigned oral hygiene aides** led to 3 fold risk reduction for dying from pneumonia vs. control group
- Levels of respiratory pathogens decreased/disappeared after **weekly professional oral health care**
- Gargling after lunch w povidone iodine less effective than professional oral health care

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CONTINUED

Tongue Cleaning (14)

- Significantly decreased total # of oral microbes on tongue immediately after cleaning
- Tongue surface in elders requiring care
  - Large amt. of tongue coating
  - Tongue dryness makes coating difficult to remove
- Tongue surface moisture level increased w use of mouthwash and mouth moisturizing gel w moisturizing ingredient
  - Softens tongue coating for easier removal
- Water has no moisturizing agent
  - does not soften coating

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CONTINUED

Tongue Cleaning (14)

- Papillae makes tongue surface rough
  - Biofilm/debris sticks
- Deep region between papillae is favorable environment for bacteria
- Lower viscosity solutions clean better than gels
- Maintaining high moisture level on tongue surface after cleaning keeps # of oral microbes low

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Tongue Cleaning (14)

- Mouthwash (low viscosity) reaches deep regions between papillae better than mouth moisturizing gel
  - Moistens dry biofilm
  - Oral microbes easily removed
  - Tongue cleaning w mouthwash keeps # of microbes on tongue surface low for longer period of time
  - # of oral microbes did not return to pre-oral cleaning levels until 5 hours after oral cleaning IF mouthwash used to clean!

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Professional Oral Care (19)

- 1 x week throughout 12 month study period
- Brush teeth w electric toothbrush and toothpaste w sodium fluoride, interdental cleaning w interdental brushes and toothpicks
  - Electric toothbrushes w rotation oscillation action more effective in reducing plaque and gingivitis
  - Oral B
- Resulted in decreased plaque score and decreased bacteria assoc. w periodontal disease
  - Plaque score did not show effects of intervention until 6 month exam
  - Decreased bacteria on tongue and supragingival plaque supported improved oral hygiene during 12 month study

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Professional Oral Care 3 month study(20)

Effects of interventions on oral hygiene and oral flora shows significant differences in groups w different dental status

- Pts had oral care plan for their specific oral status
- Mouth care
  - morning after breakfast and evening after dinner
- Staff training
  - improvement in oral care practices from the first month of implementation
- Best effect of intervention:
  - 1st edentulous pts
  - 2nd pts w full dentures
  - 3rd natural teeth only
  - Worst in dentate participants w removable dentures – partials

71

Japanese study evaluated denture adhesive removal by denture cleaners

- Use of denture adhesives increasing
- No study has evaluated denture adhesive removal by denture cleaners
  - not all products tested available in US – several available on Amazon
- Denture cleaners categorized by active ingredients
  - Hypochlorous acid, peroxides, enzymes and mineral acids
  - Each eliminate bacteria differently
- Polygrip (adhesive) residue effectively removed w water
  - Area w residue decreased over time after immersion in all denture cleaners and water (polident containing enzymes and polident for partial dentures – both have hydrogen peroxide and enzymes)
  - Greater proportion of water soluble material in polygrip (16)

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- Rated easiest to hardest to remove:
  - Powder adhesives
  - Cream adhesives
  - Cushion adhesives
- Powder adhesives easiest to remove from denture base by immersion in denture cleaners and water –
  - liquefied earlier and more completely than creams
- cream adhesives
  - effective removal required immersion in denture cleaners for over 12 hours
- cushion adhesives –
  - main component is water insoluble

STILL NEED MECHANICAL CLEANING! (16)

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Mouth Care

- May need to do baby steps!
- Administration must buy into protocol
- Educate on protocol
- Document protocol followed
- Staff held accountable!

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CONTINUED

Remember……

- Health risks related to poor oral hygiene
- Mouth care for teeth AND tongue important
- HOW TO……where to find information
- Mouth Care Protocols

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CONTINUED

Q&A

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