

OLDER ADULT AND ORAL HEALTH

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MEDICINE

What profession do you think of?

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The disciplines here represent many of the ones we think of in medicine.

DENTISTRY

What profession do you think of?

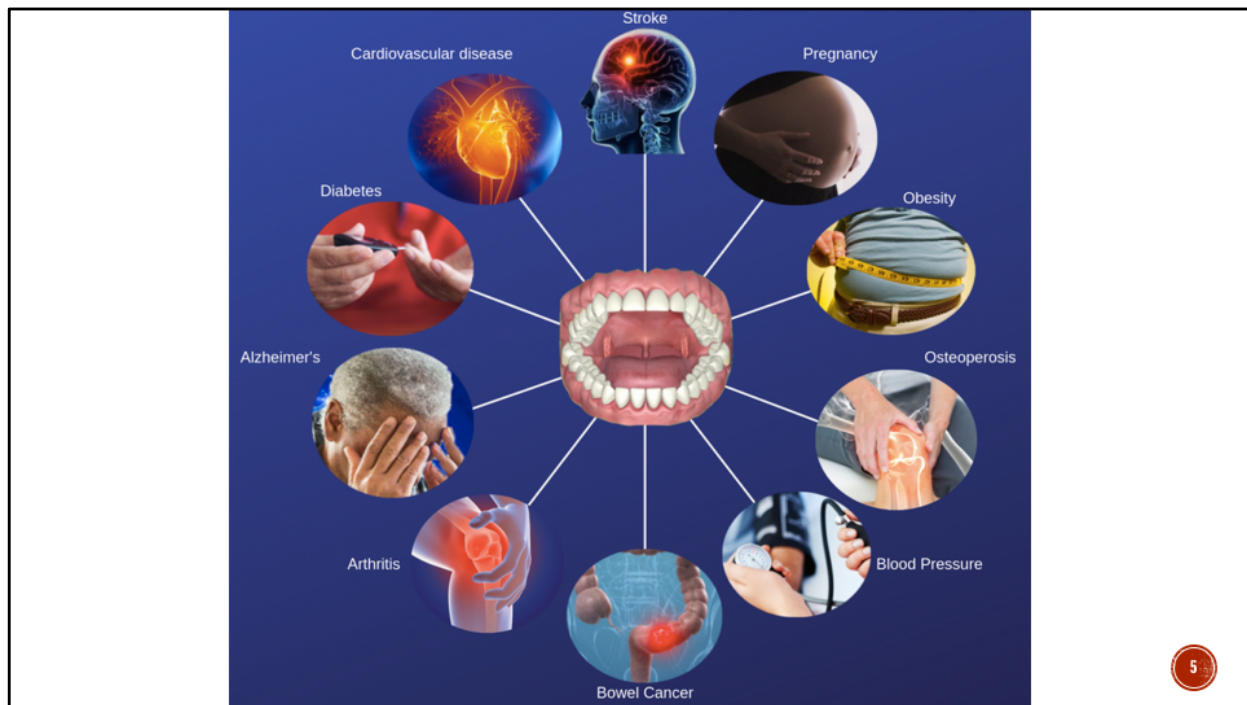
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Dentists? Endodontists? Oral Surgeons? Periodontists? Orthodontists?
Pedodontists? Hospital dentistry/ Oromaxillofacial surgeons? Special Patient
dentistry? Geriatric dentistry? Dental Hygienists? Midlevel practitioners like Dental
Hygienists in Alternative Practice? Dental Therapists? Bottom line, there are several
and each has their own roles.

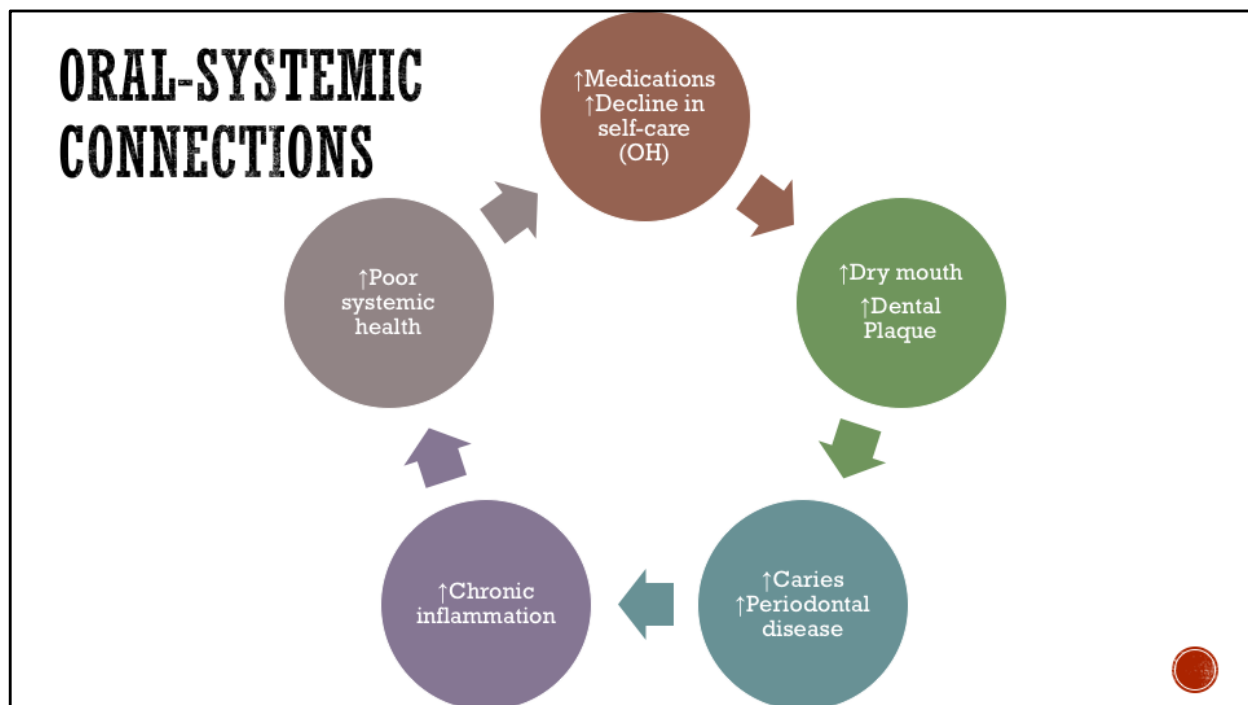


So what do we see when we look into a mouth? It is known that every health professional sees different things. Studies show most medical professionals look down the throat and past the teeth.

Oral health professionals need to know the medical conditions, medications, allergies, hospitalizations and psycho-social issues for treatment modifications.



But what you should see is the pathway into the body. The teeth are the hardest substance in your body and one of the only parts that does not heal on their own. So if this hardest substance shows damage, think what it can mean. Food choice consumptions, like excessive sugar, can deteriorate teeth. Other parts of our body may have the initial abilities to recover from this consumption but after years of assault, parts of our body do not fully recover and health problems appear; diabetes, obesity, and hypertension. The mouth should be carefully looked at as the teeth are truly the sentinels or the early warnings to the body and health. Does your profession tend to any of these health issues?



There is a cyclical pattern between oral and systemic health.

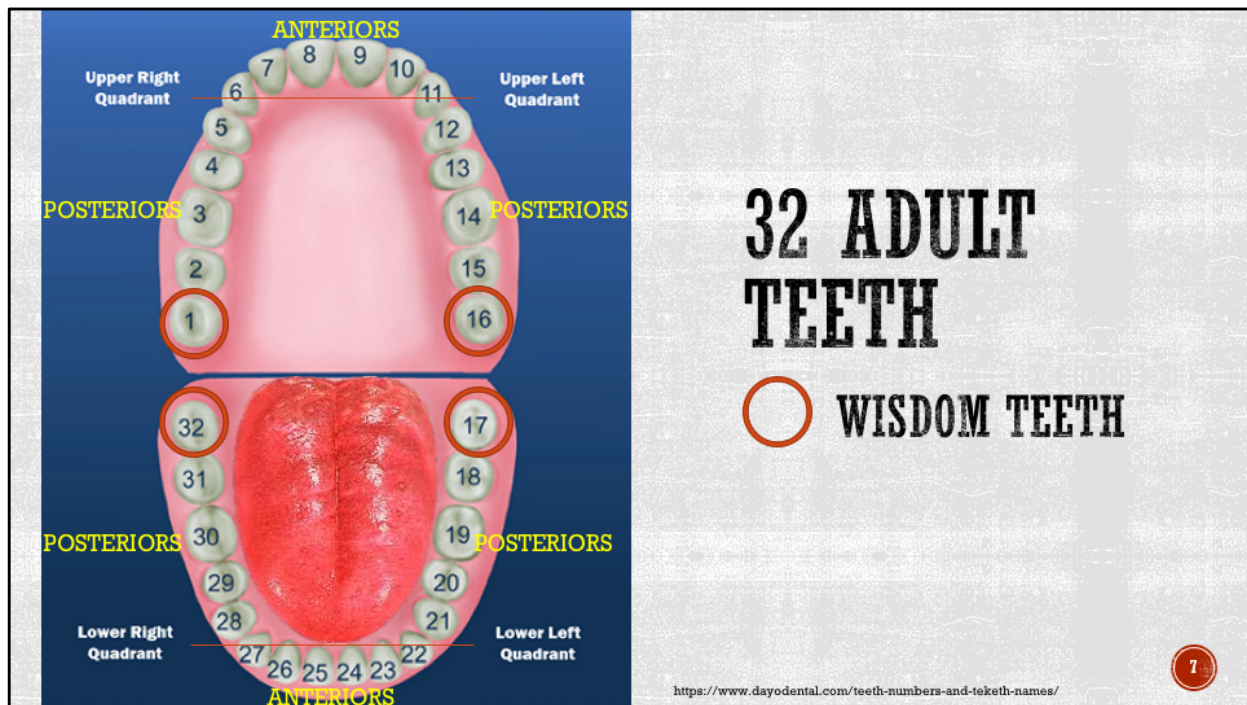
Poor systemic health often leads to more medications, inability to do oral hygiene and care.

More meds and poor OH lead to dry mouth and increased plaque.

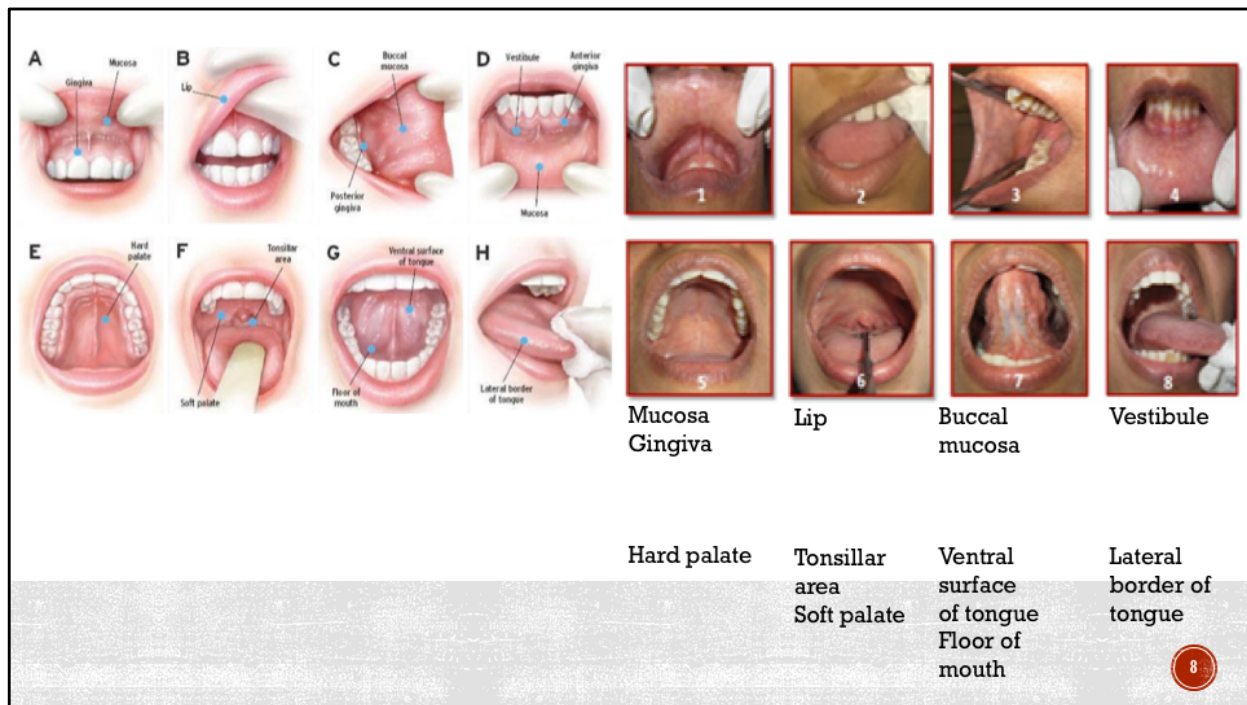
This leads to more decay and periodontal disease.

Resulting in chronic inflammation and thus leads to even poorer systemic health.

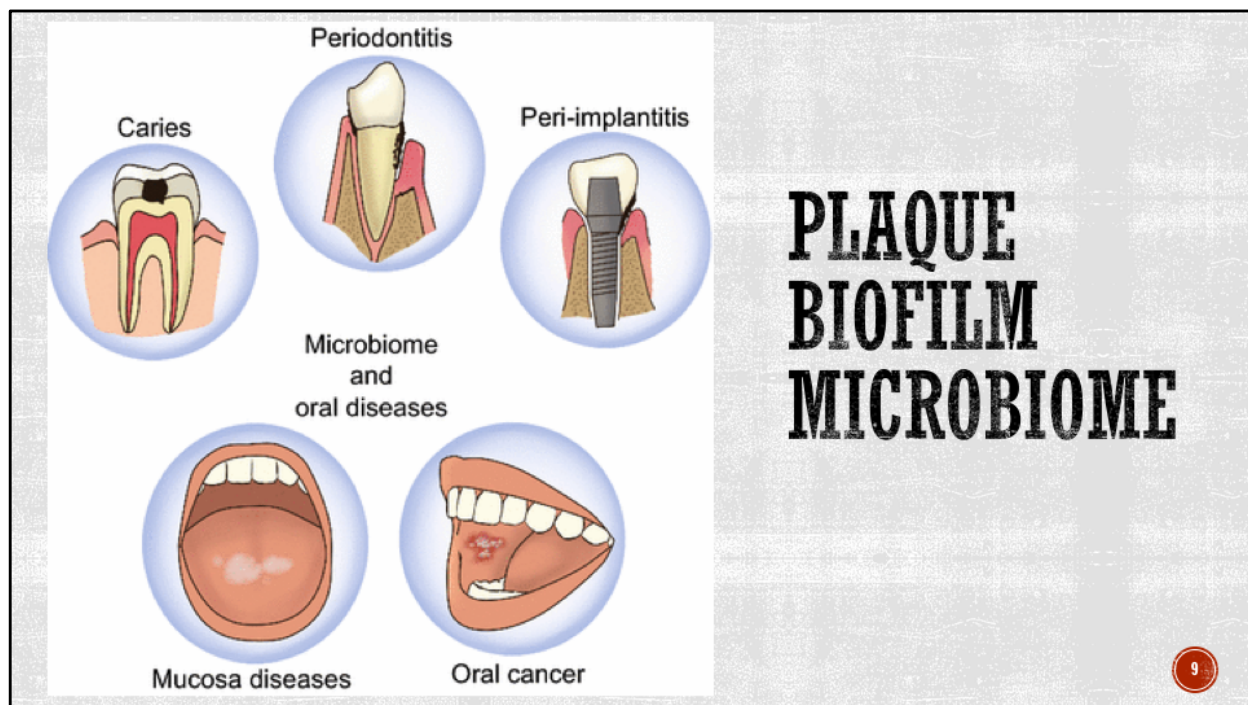
It is a vicious cycle!



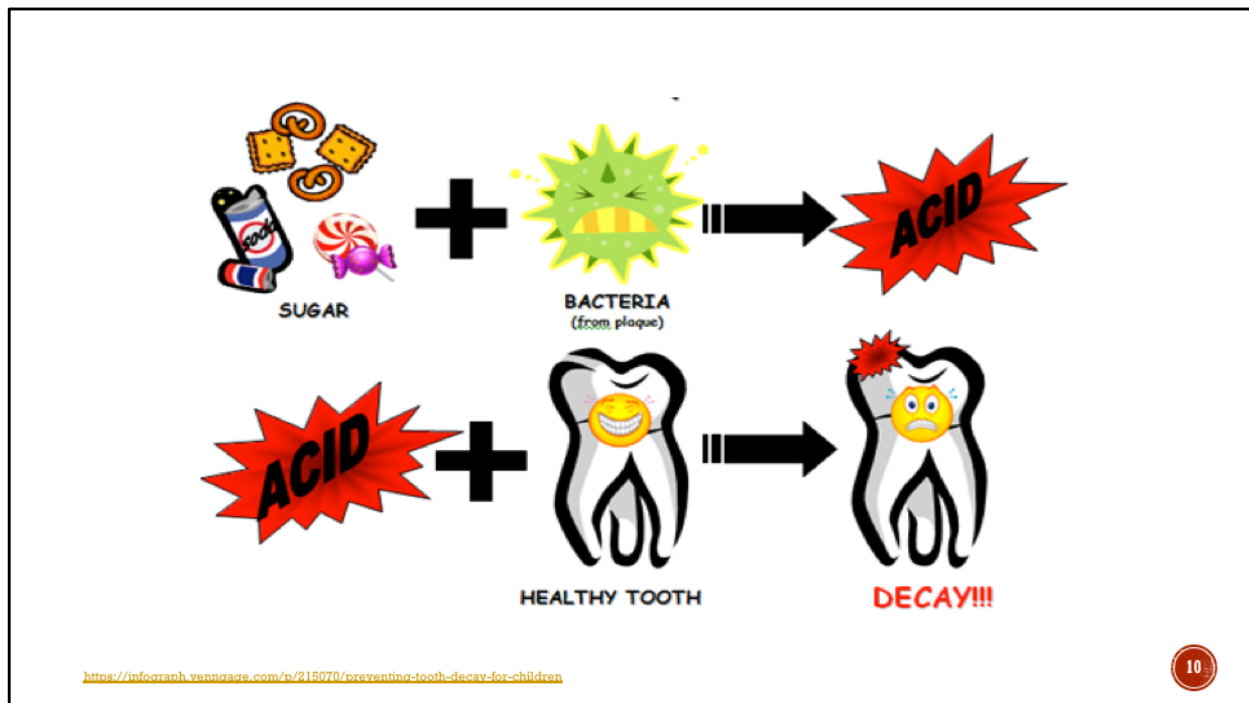
Did you know an adult mouth has 32 teeth? They are all numbered to help differentiate them. You can see in the red circles where your wisdom teeth are or were. Kids have less molars and no wisdom teeth so a total of 20 teeth.



What is in the mouth? The Mucosa (the membrane lining the mouth), the Gingiva (the gums), the Lip (the fleshy part lining the opening of the mouth), the Buccal mucosa (the inner lining of the cheeks and lip), the Vestibule (the area between the teeth and cheeks), the Hard palate (the bony roof of the mouth), the Tonsillar area (throat area), the Soft palate (the muscular portion of the roof of the mouth), the Ventral (undersurface) of the tongue, the Floor of mouth (the horseshoe shaped tissue under the tongue), the Lateral border (side) of the tongue.



Many diseases of the mouth have a relationship with plaque which is a biofilm of microbiomes. Oral diseases include Caries, Periodontitis, Peri-implantitis, Oral Cancer and Mucosal diseases like lichen planus (chronic inflammatory condition), mucositis (ulcerations of the lining of the mouth) and leukoplakias (white lesions).



The basic risk formula for tooth decay is sugar with bacterial plaque creates an acidic component that can demineralize the tooth structure.



There are physical oral changes such as and dryness and thin oral mucosa becoming smoother with increased varicosities as we age. However

there are many other such as psychological, social, etc. that come with aging. Problems with oral health can affect our ability to:

Imagine speaking words with the “F” and “S” sounds are without front teeth. What would your Smile look like?

If affects your Smell and taste and how you chew and swallow. Loss of teeth and untreated oral disease are associated with lower self-esteem and confidence.



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Another aspect to consider is the current older adult probably did not grow up with the preventive dentistry concept and believes that tooth loss is a part of the normal aging process. They may have oral problems and have adapted to their compromised oral health status.



Lifestyle and social influences also Increase our risk for cavities, gum disease, and cancer. Financial constraints can play a huge role in access to care as there is a Deficiency of dental insurance programs for the elderly (Dentical now covers more dental treatment) and a Rise in cost of dental care.



All healthcare disciplines should be able to identify changes. Can you identify possible cavities? Black, brown, and even chalky white indicate possible areas that need evaluation.



An, G. (2009). Normal aging of teeth. *Geriatr Aging*, 12(10), 513-517.

DENTAL ROOT CARIES

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Gums recede exposing softer root surfaces of teeth which leads to cavities and more periodontal problems.



Source: Guldag MU, Buyukkaplan US, Ay ZY, Katirci G - Eur J Dent (2008)

EXCESSIVE TOOTH WEAR



Teeth can be darker, brittle or more worn. What wears them down? D



PERIODONTAL DISEASE

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Periodontitis is a chronic inflammatory disease that is made worse by presence of plaque/calculus.

Tissue destruction is largely irreversible that results in the presence of gingival recession and periodontal pocketing.



Mohangi, G. U., Singh-Rambirich, S., & Volchansky, A. (2013). Periodontal disease: mechanisms of infection and inflammation and possible impact on miscellaneous systemic diseases and conditions: clinical. *South African Dental Journal*, 68(10), 462-467.

Periodontitis may disseminate of micro-organisms and their products throughout the body. The total surface area of this inflammatory field is estimated to be the size of the palm of the hand, or two palms in severe gum problems. A skin lesion of this size would prompt immediate medical intervention. However, the intra-oral infection is frequently ignored, despite the fact that it may be associated with a range of systemic diseases/conditions.



Natural cleanser
 ↑ Risk of cavities & mouth infections
 Difficult to eat, swallow, taste, speak



Hyposalivation: objective measure
 Xerostomia: subjective sensation



Dry mouth is a real problem. Saliva provides a natural cleansing action in the mouth that can decrease as the body ages. Hyposalivation increases the risk of cavities & mouth infections and makes it difficult to eat, swallow, taste and speak.

Hyposalivation: objective measure of decrease in saliva due to decrease in salivary gland function

Xerostomia: subjective sensation of a dry mouth with or without a measurable decrease in saliva



Many medications

Three most common drugs causing the gums to enlarge: The Anti-seizure medication **feh·nuh·toyn Phenytoin** (50% of patients), the Immunosuppressive **Cyclosporine**, and the Hypertension

medication of **Calcium channel blockers.**

AVOID TOBACCO AND LIMIT ALCOHOL



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How does tobacco and alcohol affect the mouth? Smoking increases the risk for periodontal or gum disease by 7 times and 15 times for oral cancer. Alcohol increase the oral cancer risk too however more commonly heavy alcohol increases the fall risk for facial and oral injuries.



Malignant melanoma



Verrucous carcinoma (SCC)

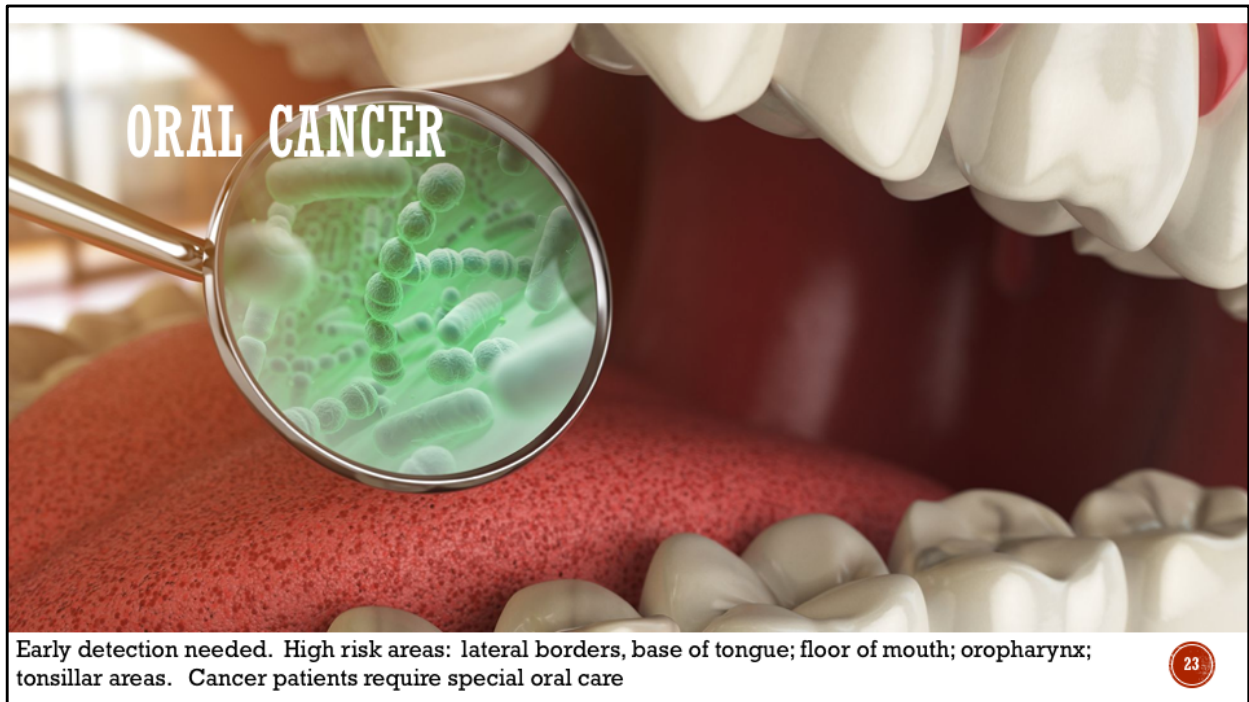


SCC arising from actinic cheilitis

<http://oralcancerfoundation.org/dental/oral-cancer-images.php>



Look at these various lesions. Usually squamous cell types. Need a biopsy to determine exact etiology and type of cancer.



Oral cancer risk increases in people over age 40 and usually has late detection. Be on alert for oral cancer lesions however also know that head or neck cancer treatments can have major side effects in the mouth and should have dental care **prior to and during** therapy. Multiple studies have demonstrated that maintenance of good oral hygiene reduces the severity of oral mucositis during treatments. It decreases risk for oral infection of by opportunistic pathogens in immunosuppressed patients due to chemotherapy.

COMMON SYMPTOMS IN THE OLDER ADULT



Talk to your dentist for these common symptoms:

- A toothache
- Temperature sensitivity
- Bleeding or sore gums
- Mouth sores
- Jaw pain or locking /clicking
- Persistent bad breath
- Dry mouth
- Cracked or broken teeth

https://www.toothbrush.org/ultimate-guide-oral-health-seniors/#positive_habits



Ask your older adult if they are experiencing any of these problems as they are the common symptoms experienced by many. A toothache, temperature sensitivity, bleeding or sore gums, any mouth sores, jaw pain or locking/ clicking when they open and close, persistent bad breath, a dry mouth or cracked and broken teeth. All these indicate they may need to see an oral health professional.

HOW DO I KEEP MOUTH HEALTH? GOOD ORAL HYGIENE



Brush your teeth twice a day
with fluoridated toothpaste

Brush your tongue daily



Floss at least once a day

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How should we promote a healthy mouth? Through good oral hygiene practices. Careful tooth brushing with fluoride, brushing the tongue, and flossing to reduce dental plaque can help prevent oral problems. Caregivers need to help with daily oral hygiene routines of older adults who are unable to perform these activities independently.



Regularly clean and care for dental appliances

<http://seniorsoralhealth.org/wp-content/uploads/brochure-tri-fold-oral-health-for-older-adults-doh.pdf>

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Complete tooth loss declined from 50% to 18% in the past 60 years according to The National Health and Nutrition Examination Survey (NHANES). Which means about 27% of seniors over age 65 have no remaining teeth. If they have dentures or partial teeth denture, they need to regularly clean and care for them. Brush daily with a commercially prepared denture cleaner and avoid abrasive pastes that can scratch the surface and leave micro-abrasions for bacteria to reside.

Denture-related stomatitis of inflammation

soak them in water or a cleaning solution to prevent drying and distortion. And BTW: Even someone who doesn't have any teeth should brush their mouth daily with a soft-bristled brush.

PREVENTION



Limit sugary drinks and sticky foods; Use fluoride



Schedule regular dentist visits

- Checks needed for
 - Sudden changes in taste and smell
 - Even those with no teeth



Fluoride and diet help create a good oral environment for prevention. The antimicrobial fluoride strengthens the tooth structure. Limiting sugar products reduces risk of cavities.

Sudden changes in taste and smell are not usually considered a sign of aging but a sign to seek professional care. Even without natural teeth, seeing a dental provider on a regular basis discovers lesions and other mucosal problems.



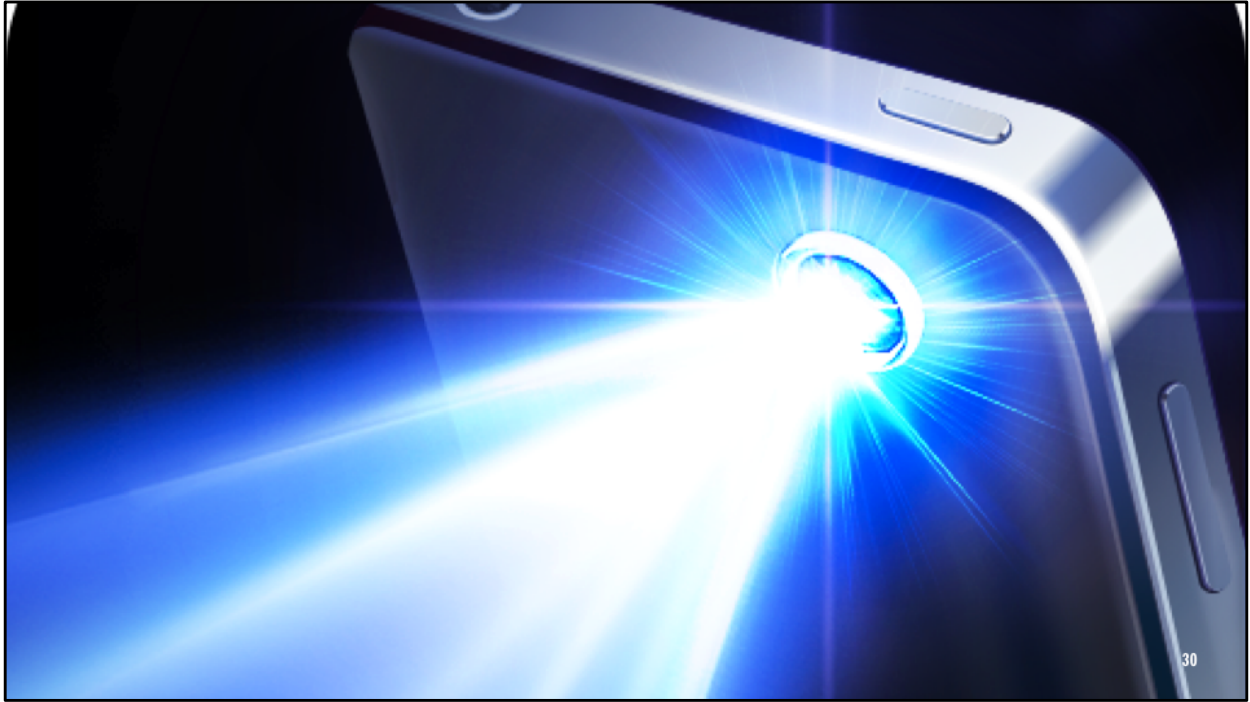
Who should be keeping an eye on the mouth? All healthcare professionals can be aware of the mouth relationships to their work and know there is a way to screen a mouth for referral. One tool is the The Kayser-Jones Brief Oral Health Status Examination (BOHSE). Another simplified version that is used for older adults in institutions is the Oral Health Assessment Tool.

EXAMPLES OF INTER-PROFESSIONAL ORAL CARE COLLABORATION

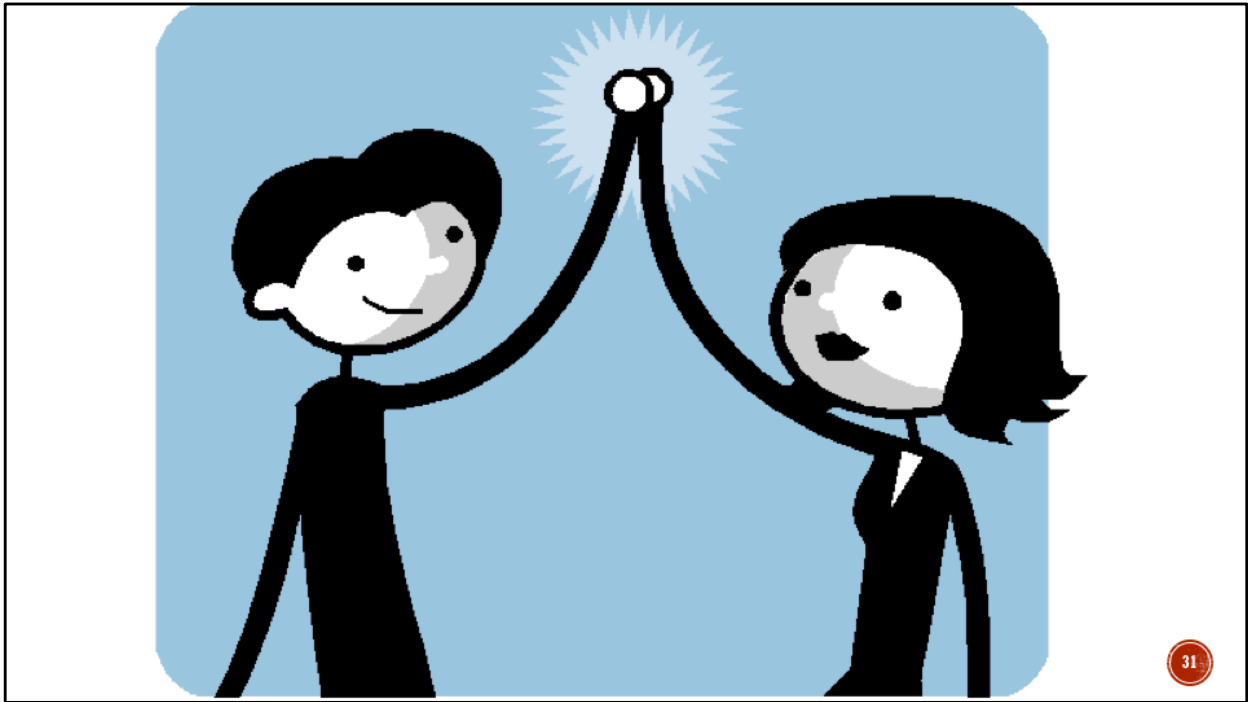
- **Screen and educate (all disciplines)**
- **Medical conditions and dental conditions relationship to treatments** (Medicine, Physician Assistant- Dentistry)
- **Drug** oral effects & interactions (Pharmacy- Dentistry)
- **Access** to dental care, psychosocial conditions, fear and pain (Social Work, Psychology- Dentistry)
- **Oral hygiene care ability and nutritional needs** (Physical Therapy, Occupational Therapy- Dentistry)



Besides screening, you can see how all the professions need to put oral health on their radar. Screening, treatment relationships, drug interactions, access to care and ability for care and nutritional needs requires interdisciplinary collaboration.



For screenings, it is advisable to wear gloves when examining a mouth. **No specific dental equipment is needed** but a good light source. A tongue depressor and gauze can be very helpful to see areas of the mouth better.



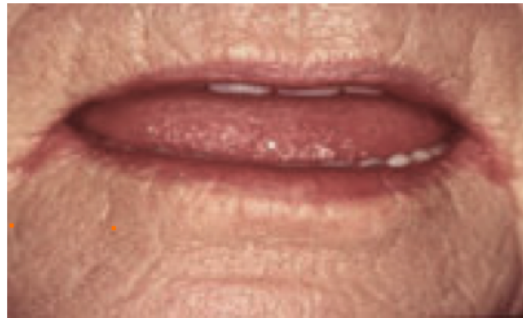
Pick a partner that you will have to practice how to screen a mouth. One person will put on gloves and use their flashlight to illuminate the mouth structures. One can record.

Category	0 = Healthy	1 = Changes	2 = Unhealthy	Category Scores
Lips	smooth, pink, moist	dry, chapped, or red at corners	wellington or lump, white/red ulcerated patch, bleeding/ulcerated at corners	___
Tongue	normal, moist, roughness, pink	patchy, fissured, red, coated	patch that is red &/or white, ulcerated, swollen	___
Gums and tissues	pink, moist, smooth, no bleeding	dry, shiny, rough, red, swollen, one ulcer/sore spot under dentures	swollen, bleeding, ulcers, white/red patches, generalized redness under dentures	___
Saliva	moist tissues, watery and free-flowing saliva	dry, sticky tissues, little saliva present, person thinks they have a dry mouth	tissues parched and red, very little/no saliva present, saliva is thick, person thinks they have a dry mouth	___
Natural teeth Yes / No	no decayed or broken teeth/roots	1-3 decayed or broken teeth/roots or very worn-down teeth	4+ decayed or broken teeth/roots, or very worn-down teeth, or less than 4 teeth	___
Dentures Yes / No	no broken areas or teeth, dentures regularly worn, and named	1 broken area/tooth or dentures only worn for 1-2 hrs daily, or dentures not named, or loose	more than 1 broken area/tooth, denture missing or not worn, loose and needs denture adhesive, or not named	___
Oral cleanliness	clean and no food particles or tartar in mouth or dentures	food particles/tartar/plaque in 1-2 areas of the mouth or small area of dentures, or halitosis (bad breath)	food particles/tartar/plaque in most areas of the mouth or on most of dentures, or severe halitosis (bad breath)	___
Dental pain	no behavioral, verbal, or physical signs of dental pain	are verbal &/or behavioral signs of pain such as pulling at face, chewing lips, not eating, aggression	physical pain signs (cheek or gum swelling, broken teeth, ulcers); verbal &/or behavioral signs (pulling at face, not eating, aggression)	___
TOTAL SCORE				___/16

Here is the OHAT form that you have with 7 categories to assess. Score the categories from 0 healthy to 1 changes or 2 unhealthy. **You can even circle individual words which helps determine a score in each category. Note 1 or 2 needs referral.** We will evaluate the Lips, Tongue, Gums, Saliva, Teeth, Dentures, Cleanliness and Pain. Ready? Here we go!

OHAT PRACTICE

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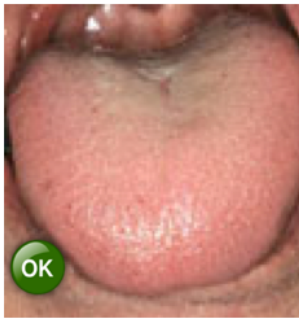


LIPS

Dryness, lumps, cracked corners, inflammation or abnormal color

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Look at the lip for dryness, lumps, cracked corners, any inflammation or abnormal color. Healthy? No? Score it now.



TONGUE

Patchy, white coating, redness
or swelling

35

Now look at the tongue. You can use the gauze to examine the tongue. Is it patchy, have a white coating, have redness or swelling? Score it now.



GUMS AND/OR ORAL TISSUES

Ulcers, sores, redness or
bleeding

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Use the tongue depressor to look at the gums and oral tissues for ulcers, sores, redness or bleeding. Healthy? No? Score it now.



DRY MOUTH AND SALIVA

- Saliva that is thick stringy, rope-like, sticky frothy, sticky bubbly or water clear saliva; dry oral tissues

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Can you see good saliva in the mouth? Or is it thick and ropy or is the mouth have signs of dryness? Score it now.



OK



TEETH

- Worn down teeth, black or brown spots (decay), broken fillings, loose or broken teeth, exposed tooth roots

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How do the teeth look? Check for worn down or broken, black or brown spots, or very few teeth. Healthy? Not so much? Score it now.



DENTURES

- Cracks, breaks, worn, signs of irritation, chipped or broken teeth on dentures, bent or broken wire or clips on partial dentures

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If the older adult has dentures, look at them for crack, breaks, or excessive wear. Score it now.



OK



FUNCTION AND CLEANLINESS

- Bad breath, difficulty eating, swallowing or speaking, poor oral cleanliness and food left in mouth or denture.

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This is an overall assessment of how the mouth is. Is bad breath a problem? Eating, speaking? Is the cleanliness a problem? Score it now.



PAIN

- Physical pain signs (swelling of cheek or gum, broken teeth, tooth sensitivity, ulcers), as well as verbal and/or behavioral signs

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Those who are having cognitive issues may be unable to report the level of pain they are having. Look for signs that indicate there might be a problem. If the older adult shares sensitivity or pain, it will be easy to score. Score it now.

OHAT OUTCOMES

Refer person to have a dental examination by a dentist.

- *Check if the older person needs to be referred to a dentist, especially if there is a score of 1 or 2 for any category.*

Person or family/ guardian refuses dental treatment.

- *Check if the older person and/or their family/guardian has refused dental treatment.*

Complete Oral Health Care Plan and start oral hygiene care interventions for person.

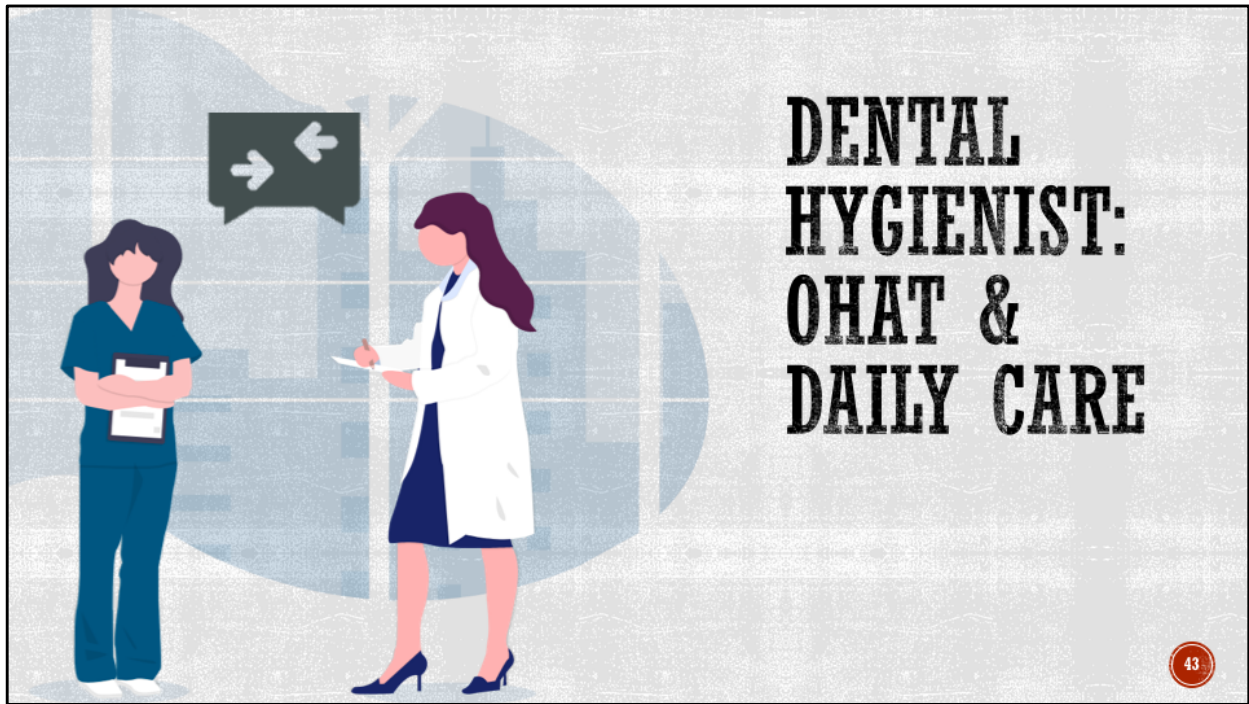
- *Institutions have to check if they are going to complete the Oral Health Care Plan*

Review this person's oral health again on: Date ____ / ____ / ____

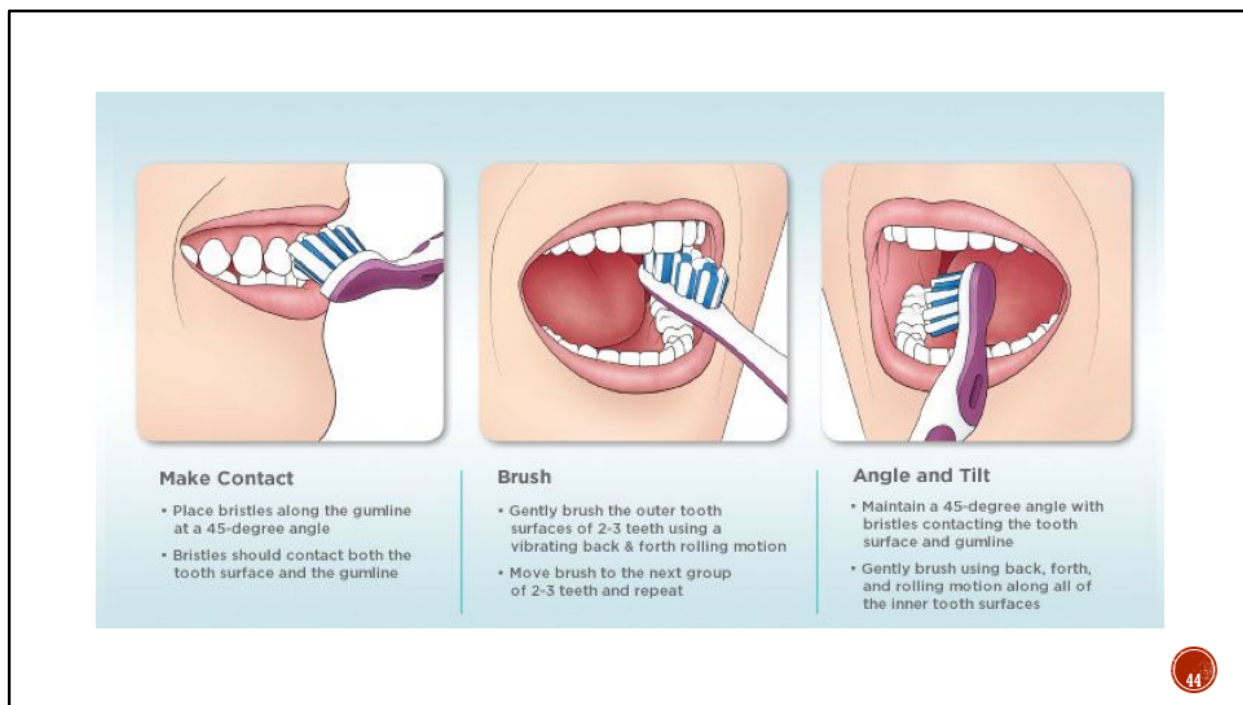
- *Check to review the older person's oral health again with the future review date.*



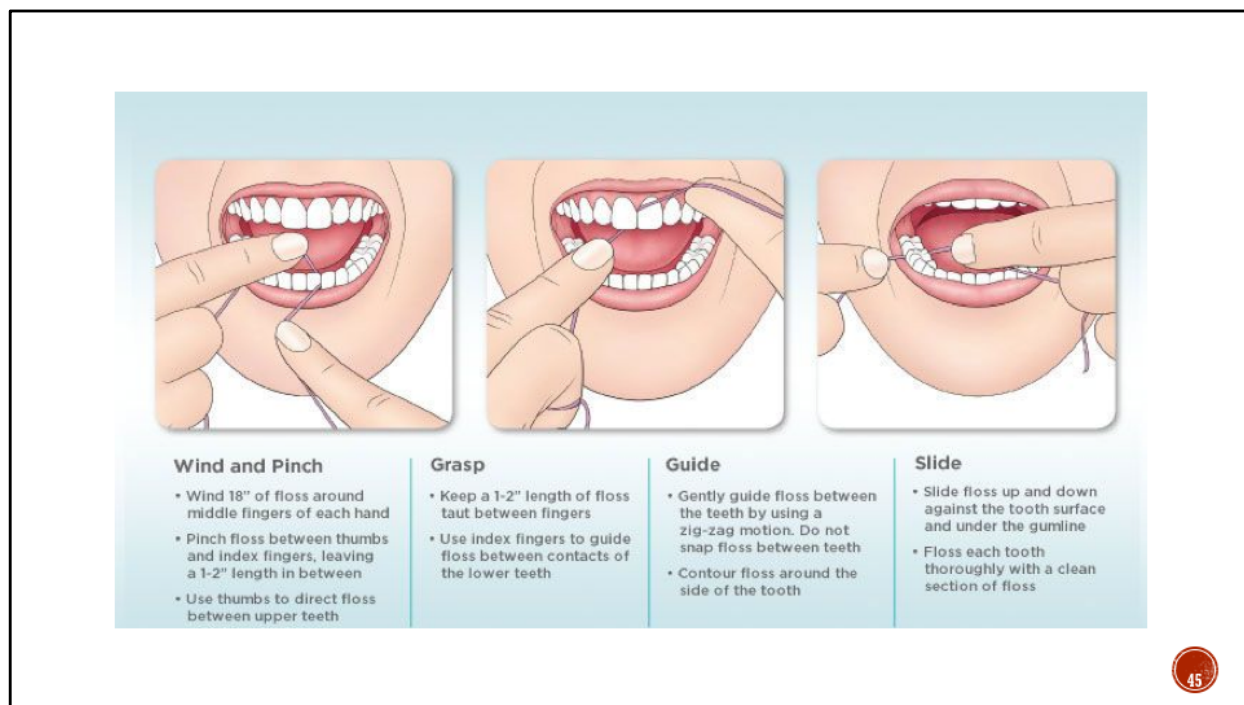
Add up your scores to have a baseline assessment to compare at future assessments. Any score of 1 or 2 is for some intervention or referral. On the bottom of the sheet, please complete the questions. A list of low-cost dental resources are in your packet.



Strategize what team members will do the oral screening for their resident. Each team should have their dental hygienist give a quick review of how to do daily care in mechanically removing the biofilm. If your team is missing one, join another team for this part.



Look for these resources on brushing



Look for these resources on flossing

**HAVE I
ANSWERED ALL
YOUR
QUESTIONS?**



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Have I answered all your questions

FUN FACTS ON BACTERIA

- An estimated 300 different species of bacteria live inside our mouths.
- A ten-second French kiss can spread as many as 80 million bacteria between mouths.
- More bacteria are on a mobile phone than on a toilet seat.
- More than 30 trillion bacteria are in our body at any given time.
- Bacteria are only 1/500th of a human hair in width but can cause big problems in our mouths.

RESOURCES

- National Institute on Aging Age Page
<http://www.nia.nih.gov/HealthInformation/Publications/teeth.htm>
- CDC Oral Health for Older Americans
http://www.cdc.gov/oralhealth/publications/factsheets/adult_older.htm

Here are a couple of resources that you can refer to.



Thank you.