

ORAL HEALTH



ORAL HEALTH

Self Assessment

(to be completed before reading Oral Health content)

1. What is plaque?
 - a. food particles stuck between teeth
 - b. saliva
 - c. the sticky layer of bacteria in the mouth that coat the teeth
 - d. gum disease

 2. What directly causes dental decay?
 - a. plaque
 - b. eating foods that break down easily into sugars
 - c. the acids produced by bacteria and sugars in the mouth
 - d. cavities

 3. What can be done to prevent tooth decay and cavities?
 - a. brush teeth twice daily
 - b. use fluoride toothpaste
 - c. floss between teeth once per day
 - d. eat a balanced and healthy diet
 - e. visit the dentist on a regular schedule
 - f. all of the above

 4. Which of the following statements describe baby bottle decay?
 - a. tooth decay in young children
 - b. the result of putting children to bed with bottles containing milk or juice
 - c. a preventable dental condition in infants and young children
 - d. may prevent the proper spacing of adult teeth in the mouth
 - e. may slow or impact the acquisition of speech in children
 - f. all of the above

 5. Which of the following statements describe gingivitis?
 - a. early gum disease
 - b. may cause red, swollen gums and/or bleeding of the gums
 - c. caused by irritation of the gums due to plaque build-up
 - d. a reversible condition
 - e. all of the above

 6. What is an abscess?
 - a. an infection or damage in the pulpy root of a tooth
 - b. a pocket of pus where the tooth root meets the jaw
 - c. a dental condition that is usually treatable by a root canal
 - d. all of the above
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Self Assessment

(continued)

7. What is NOT part of the correct procedure for a knocked-out tooth?
 - a. hold the tooth only by the crown
 - b. carefully rinse off any debris, without damaging the root or attached tissue
 - c. hold the tooth in the socket
 - d. place the tooth in a cup of milk
 - e. go to the dentist
 - f. place an aspirin against the tooth socket

8. Diet is important in maintaining good dental health.
 - a. True. Diet plays a role in the health of teeth and gums.
 - b. False. It doesn't really matter what you eat.

9. Cavities are only a concern for children.
 - a. True. Only children are susceptible to tooth decay and cavities.
 - b. False. Adults may experience tooth decay around an existing filling or may experience a cavity deep in the root of a tooth causing an abscess.

10. Dental varnish is:
 - a. the same thing as dental sealant.
 - b. a treatment commonly used on both adults and children.
 - c. a fluoride coating to prevent cavities in baby teeth.
 - d. all of the above.

Answers: 1(c), 2(c), 3(f), 4(f), 5(e), 6(d), 7(f), 8(a), 9(b), 10(c)

ORAL HEALTH

Supporting information for outreach workers

I UNDERSTANDING HEALTH CONDITIONS OF THE TEETH AND GUMS

What are some common conditions of the teeth and gums?

Although many individuals go their entire lives without dental problems, it is not uncommon for both adults and children to suffer tooth decay and cavities. Plaque and tooth decay may cause gingivitis, or early gum disease, which can progress to serious periodontal disease. Another common health condition among adults is an abscess, or infection, in the root of a tooth.

Young children may suffer from tooth decay leading to serious cavities, as a result of certain feeding behaviors, such as going to bed with bottles containing milk or juice. Cavities in infants and young children are known as baby bottle decay.

What is plaque?

Plaque is the sticky layer of bacteria that coat teeth. These bacteria live in the mouth and release acid as a by-product after carbohydrates or sugars are eaten and broken down. The acids attack the enamel of teeth and can promote tooth decay over time. If plaque is not controlled, it may harden into tartar or calculus, which must be removed by a dentist. Tartar may contribute to the early stages of periodontal disease, or gingivitis, as it makes teeth harder to clean on a daily basis and gums become inflamed.

Plaque may be controlled through good dental hygiene such as regular toothbrushing with fluoride toothpaste and flossing to remove food particles that remain lodged between the teeth.

What causes tooth decay?

Tooth decay is caused by acids that lower the pH of the mouth and cause de-mineralization of the teeth. These acids are a direct result of the first steps of the digestive process whereby sugary foods or drinks and carbohydrates are broken into simple sugars in the mouth. Cakes, soda and candies contribute to acid formation, but other carbohydrate foods such as potatoes, bananas, chips and pretzels do too. The simple sugars coat the teeth, and bacteria already present in the mouth feed on these sugars, forming acids as a by-product. The acids cause the pH of the mouth to begin to fall. Although a slightly acidic environment in the mouth does not typically cause damage to the teeth, once the pH falls below 5.5, the enamel on the tooth begins to de-mineralize, weakening the tooth's structure. The longer the mouth's pH remains at or below 5.5, the more potential damage is being done.

[Neutral pH is 7.0, and after brushing the mouth has a pH between 6.2 to 7.]

Is dental caries an infectious disease?

Yes, dental caries is considered an infectious disease. Cavities are a direct result of acid produced by certain bacteria that live in the mouth and feed on sugars. These cavity-causing bacteria can be spread from person to person. Transmission might occur when a mother holds a pacifier in her own mouth before giving it to her child, and when a parent chews food prior to giving it to the child. Other similar activities that allow the bacteria in plaque to move from one mouth to another could spread the infection.

Are certain teeth more susceptible to decay?

Teeth that have more indentations, like molars, are more likely to trap food particles and therefore are more likely to decay.

How do cavities form?

Dental decay is a de-mineralization of the exterior of the tooth caused by exposure to an acidic environment in the mouth. A white spot may appear on the tooth, indicating the weakness. At this point in the development of a cavity, the tooth can repair and re-mineralize the weak spot with the help of fluoride and minerals in saliva. However, if the weakness persists, it may break through the enamel (the hard coating that protects the tooth), at which point the damage to the tooth is permanent. At this stage of a cavity, the decay must be cleaned out and the hole filled by a dentist to prevent further damage to the tooth and the nerves in the root of the tooth. Children and young adults are more susceptible to tooth decay and cavity formation from acute caries, while older adults may experience chronic (or recurrent) caries.

Are cavities just for kids?

No, older adults may have problems with dental decay as well. Among adults, tooth decay is considered recurrent and takes two forms: cavities that form around an already filled cavity or dental work and root cavities caused by receding gums or gum disease. Old fillings are not smooth and may crack, allowing bacteria to accumulate in the gaps and produce acid that leads to decay. Receding gums allow bacteria and their resulting acid access to tooth roots. Because tooth roots are covered with cementum, a protective substance that is softer than enamel, the roots are more susceptible to decay.

What is an abscessed tooth?

An abscessed tooth is one in which there is a pocket of pus (infected fluid) at the root tip of the tooth in the jawbone. If left without care, an abscessed tooth could cause damage to the bone of the jaw. An abscess is usually caused by a deep cavity or an injury to the pulp, or bundle of tissue that contains the nerves, blood vessels and connective tissue, within the tooth. Both injuries and deep cavities can allow bacteria into the pulp where an infection can take hold. In the past, abscessed teeth had to be pulled to prevent further damage to the jawbone. Now, an abscessed tooth may be saved by a root canal procedure performed by the dentist.

What is gingivitis?

Gingivitis is another name for early periodontal disease. In the earliest stages, periodontal disease is reversible and only affects the gum tissue, not the condition of the teeth. Common symptoms of gingivitis include red, swollen gums and a propensity for gums to bleed while brushing. Gingivitis may be prevented by good dental hygiene including brushing teeth twice daily, flossing once per day, eating a healthy diet, and making regular visits to the dentist.

What is gum disease?

Gum disease is also called periodontal disease. Plaque, the sticky layer of bacteria that coats teeth, may cause an infection of the tissues that support and surround the base of each tooth. Although it appears that gum tissue is attached high on the sides of the teeth, there is actually a small v-shaped crevice between the gum tissue and the teeth called the sulcus. Infections may lodge within the sulcus where they can cause the breaking down of the tooth's connective tissues. Over time, these infections may cause the sulcus to enlarge into a pocket. Periodontal disease is a major cause of tooth loss in adults.

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Early periodontal disease is called gingivitis. Gingivitis is reversible through consistent brushing and flossing of the teeth. It causes symptoms such as red, swollen gums, and a propensity for gums to bleed. Advanced periodontal disease is known as periodontitis, and causes permanent damage to the gums and underlying bone structure. In this state of the disease, teeth may become loose and fall out or have to be removed by a dentist.

Signs of periodontal disease include:

- red, swollen and tender gums
- gums that have pulled away from the teeth
- gums that bleed when teeth are brushed
- pus between the teeth and gums
- bad breath
- loose teeth
- a change in the way teeth fit together when biting
- a change in the fit of partial dentures

Periodontal disease can be prevented through consistent cleaning of the teeth including brushing at least twice daily and flossing to remove particles stuck between the teeth.

I ORAL HEALTH FOR INFANTS AND SMALL CHILDREN**What is baby bottle decay?**

Tooth decay in infants and children is commonly referred to as baby bottle decay. Infants and children are at risk of tooth decay just as soon as their first teeth begin to appear, usually around six months of age. Decay in children's teeth, as with adults, is a result of sugars from foods and beverages combining with bacteria to create acids. Milk, juices, and formulas can all feed the cycle of acid-creating bacteria and lower the pH in the mouth for around 20 minutes at each serving. It isn't only what the child drinks that causes risk for baby bottle decay, but also how often and for how long the child drinks. For this reason, it is unwise to give children sweetened beverages many times during the day, or at bedtime for comfort.

Why are baby teeth important?

Children need healthy teeth for chewing food, learning to speak, and to feel good when they smile. Healthy baby teeth hold a space in the jaw for adult teeth to fit into as the child grows. If baby teeth are not present as space holders for adult teeth, the jaw may require extensive orthodontic repair upon reaching adulthood. In addition, tooth decay and cavities may cause pain, and children need not suffer the pain of a toothache.

How can baby bottle decay be prevented?

- Wipe baby's gums with a soft cloth after each feeding. As teeth begin to come in, combine brushing teeth with using the cloth on areas of the mouth where teeth haven't erupted yet.
 - Begin flossing when all baby teeth have come in, usually at around 3 years of age.
 - Do not put the child to bed or down for naps with a bottle containing anything but water.
 - Do not give children sugary beverages such as soda. These have no nutritional value and contribute to the decay of otherwise healthy teeth.
 - If the water supply does not contain fluoride, ask the pediatrician how much fluoride the child needs and what source to use.
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- Begin dental visits as early as the first birthday. Consult the dentist if there are concerns about the child's teeth.
- Have fluoride varnish applied to baby teeth.

I DENTAL VARNISH

What is dental varnish?

Dental varnish is a temporary fluoride protective coating that is painted onto baby teeth to help prevent cavities from forming and slow any decay that has already started. It may be applied to teeth as soon as they come in, no matter how young the child. Because such a small amount is applied to teeth and it dries quickly, there is no risk of the child swallowing the fluoride varnish.

How does dental varnish work?

A small droplet of varnish is painted onto each baby tooth where it dries quickly, even in the presence of saliva. The application usually takes less than one minute with a child patient. Parents or caregivers are asked to ensure that the child eat only soft, nonabrasive foods for the rest of the day, and not to brush or floss the teeth until the next morning. The child's teeth will not look as shiny as they did before the treatment, but they return to their prior shiny condition when the varnish is brushed off the next day. If these conditions are followed, the varnish remains on the teeth for several hours where fluoride is released directly onto the teeth. It is recommended that the varnish be applied to baby teeth every six months.

Why is dental varnish important for baby teeth?

Dental varnish is important because it can help reduce the incidence of childhood dental decay and cavities. Fluoride varnish can help protect baby teeth in children who may not be able to access regular dental care due to cost, availability or other reasons. Children need baby teeth for:

- chewing food
- speaking clearly
- retaining a space for permanent teeth
- aiding in jaw and facial formation
- overall good health.

How is dental varnish different from dental sealants?

Dental sealant is a clear material that is applied to the chewing surfaces of the back teeth, where crevices and cavities are most likely found. The sealant acts as a barrier, preventing plaque from coating the crevices of the back teeth and thus preventing acid from forming in those grooves. The procedure is simple, and is administered after teeth have been cleaned by the dentist or hygienist. First, the chewing, or flat, surface of the tooth is conditioned so that the sealant will adhere to the tooth. The sealant is then painted onto the tooth enamel where it bonds to the tooth and will provide long-term protection from acid attack. Sealants generally last several years and are not damaged easily by the force of chewing.

I THE LINK BETWEEN DIET AND ORAL HEALTH

Is snacking unhealthy for my teeth?

Whenever a snack that breaks easily into its simple sugars is eaten, the pH in the mouth typically drops below 5.5 for 20 to 30 minutes, depending on the individual. During these intervals, the tooth is subjected to stress from the acidic saliva. People who snack throughout the day or sip on soft drinks or sweetened beverages are causing a relatively consistent acidic environment in their mouths, thus potentially damaging the teeth.

How does nutrition impact dental health?

Nutrition is directly related to dental health because certain kinds of foods and beverages feed the bacteria that create acid and thus promote tooth decay. Carbohydrates and sugary foods are broken easily into simple sugars by the enzymes in the mouth. These sugars are then consumed by bacteria already present in the mouth which release acids as the by-product. The mouth's environment typically remains acidic for at least 20 minutes before saliva can restore the pH of the mouth to its normal neutral condition. Acid works to de-mineralize the teeth and can promote tooth decay leading to cavities and abscesses in the teeth.

Some tips for better dental health:

- Eat moderate amounts of a variety of different foods including vegetables, fruit, grains, dairy and proteins.
- Limit snacks. Each time carbohydrates or starches are eaten, the mouth becomes acidic and promotes tooth decay for 20 minutes.
- Choose healthy snacks such as raw vegetables, cheese, yogurt or fruit.
- Concentrate most calories into mealtime. During a meal, more saliva is released than during snacks, which can counter the tendency for the mouth to become acidic in response to carbohydrates and sugary foods.
- Brush twice daily with fluoride toothpaste.
- Floss once per day to remove stubborn food particles and maintain healthy gums.
- Visit the dentist regularly.
- Dental varnish for children.

I EFFECTS OF TOBACCO PRODUCTS ON TEETH

Is tobacco bad for teeth and gums?

Yes, tobacco IS bad for teeth and gums. The nicotine in tobacco causes blood vessels to constrict, reducing the flow of nourishing blood to the teeth and gums. Use of any type of tobacco product such as cigarettes, cigars, snuff or chew can increase the risk of oral cancers and periodontal disease, which is a leading cause of tooth loss. In addition, smokeless tobacco products often contain grit or sand, which can wear and damage the surfaces of teeth.

What are signs or symptoms of oral cancer?

Signs or symptoms of oral cancer may include:

- tenderness, burning or a sore that does not heal
 - pain or numbness in the mouth or lips
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- a lump, or leathery, wrinkled or bumpy patch inside the mouth
- color changes to the mouth tissues (gray, red or white spots or patches)
- difficulty chewing, swallowing, speaking or moving the jaw or tongue
- change in the way that teeth fit together.

I PRACTICING GOOD ORAL HYGIENE

What are the proper steps to clean teeth?

- Brush teeth twice a day with a fluoride toothpaste.
- Floss once each day to remove stubborn food particles and plaque from between the teeth and under the gumline.
- Eat a balanced diet.
- Limit snacks between meals.
- Visit the dentist regularly for professional cleanings and oral exams.
- Replace toothbrushes every 3-4 months

What is important to remember about tooth brushing?

Brushing can help reduce the amount of cavity-causing plaque on the surface of teeth. It is recommended that teeth be brushed at least twice (2 times) daily with a soft-bristled brush. The head of the toothbrush should not be so large as to prevent it from accessing the corners of the mouth and back teeth. The toothpaste should contain fluoride, and only a small pea-sized amount is needed to adequately clean the teeth. Although many techniques for toothbrushing provide good results, the important things to remember are to brush all surfaces of the tooth including the inner side, the outer side, and the flat chewing surfaces. The brush can be used vertically to access the inner sides of the front teeth. Brushing the tongue can help reduce acid-causing bacteria in the mouth and freshen the breath.

What is the proper method for flossing?

Good flossing technique takes practice. At first, this activity may seem difficult and time-consuming, but with time, it becomes less of a hassle. To begin, cut a piece of floss that is approximately 18 inches or more in length. Wrap most of the floss around the middle finger on one hand, leaving a short tail long enough to wrap 3 times around the middle finger of the opposite hand. This finger will wind up the used floss. Holding the floss tightly with the thumb and first finger of each hand, gently insert the floss between two teeth. Do not snap the floss through the tight space, but rather saw it back and forth if necessary. Once the floss is down to the gum line, curve it around one of the adjacent teeth, moving the floss below the gumline and rubbing the side of the tooth. Repeat this action with all of the teeth, not forgetting the back side of the last teeth. Dispose of the floss upon using the entire length.

What is fluoride, and is it necessary for healthy teeth?

Fluoride is the ionic form of the element fluorine. It works to control early dental caries through several different mechanisms. Fluoride concentrates in both plaque and saliva where it inhibits the de-mineralization caused by acids produced by bacteria and sugars in the mouth. It also promotes re-mineralization of weakened enamel. Fluoride also acts to inhibit the process by which bacteria in the mouth metabolize sugars from carbohydrates into the acid that promotes plaque and de-mineralization of the teeth.

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Fluoride is made available to teeth through both topical and systemic means. Topical fluoride strengthens teeth that are already present in the mouth. Forms of topical fluoride include fluoridated toothpaste and other fluoride dental products such as mouthwashes or therapeutic applications by the dentist. Systemic fluoride is taken up by the body and strengthens teeth from the inside out, including teeth that have not yet erupted. Systemic fluoride is available through most city water supplies in the United States, where it has helped reduce the incidence of dental caries over the past 60 years. Families who rely on well water should have their water tested to determine if there is an adequate level of fluoride. Following the use of either topical or systemic fluoride, the concentration of fluoride present in the saliva and plaque is raised which promotes re-mineralization of teeth. The level of fluoride in the mouth returns to normal usually within 1-2 hours.

The only known risk associated with fluoride use is the possibility of dental (enamel) fluorosis, which is a cosmetic effect with no known adverse health consequences. Fluorosis results from a disruption in the mineralization of not yet erupted teeth in children due to chronic exposure to systemic fluoride. Because enamel is not completely formed until after the age of six, children under six may be at risk for the development of fluorosis. This condition usually manifests as lacy white markings on the surface of the teeth which are not usually noticeable by a casual observer. Because of children's increased risk for this dental condition, parents of children younger than six years of age should carefully monitor their children's use of fluoride-containing dental products. Additionally, supplemental fluoride should only be prescribed for children living in areas that do not have a fluoridated water supply.

Does it matter which dental products are used?

There is a vast array of dental products to choose from, and it can be hard to know which items are the best for the health of teeth and gums. Choose toothbrushes that have soft bristles and a head that is sized appropriately for the individual's mouth. Remember to change to a new toothbrush every 3-4 months. With dental floss, the issue is not what brand or variety to use, but how to floss correctly so that gum tissue is not damaged. There are other interdental cleaning aids for persons who have difficulty managing the dexterity required to floss one's own teeth.

The American Dental Association marks certain products with a Seal of Acceptance, signifying that the product has met criteria to verify safety and effectiveness. Although participating in this self-regulatory process is strictly voluntary, some 350 companies do contribute their resources to evaluate, test, and market their products to both the consumer and dental professionals.

I DENTAL PROCEDURES**What should be expected during a tooth extraction?**

A tooth extraction is a very common dental procedure that although painful, is typically not serious. During the appointment to the dentist, the area surrounding the tooth to be extracted is numbed to lessen the discomfort. The numbing medication is typically administered by localized shots into the gum tissue. Once the dentist has ensured that the tissue is numb, the tooth will be extracted from its socket and packed with gauze to stop the bleeding. Loss of blood is typically very minimal. The dentist provides guidance of the home care needed, though the rule is generally to avoid any activity that may prevent healing of the socket. Some discouraged activities are: smoking, rinsing the mouth too vigorously, sucking through a straw,

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and brushing and flossing the immediate area of the extraction. Any of these activities could dislodge a blood clot and cause further bleeding. Any excessive bleeding should be reported to the dentist.

What are the options for dental fillings?

There are several different options for dental fillings, should a patient require dental repairs. One of the oldest filling materials is amalgam (silver filling), a mixture of metals including silver, tin, copper and mercury which bind the metals into a hard, stable and safe substance used to repair teeth. Although there have been concerns about possible toxicity of having mercury within the mouth for long periods of time, research has not shown any adverse health effects of the substance in use as a restorative. A very small number of individuals may be allergic to the mercury in amalgam and may present with symptoms similar to those of any allergic reaction. Another possible restorative material is a composite resin made of plastic (from glass and resin) that can be matched to the tooth color for an invisible finish. Composite resins are a good, though expensive, solution to restoration of the front teeth, where metallic finishes are most noticeable.

What is a crown?

A crown is the restorative solution for a tooth that does not have enough structural tooth material left to be re-filled. While small cavities and tooth damage can be repaired with a hard, stable filling material, the restoration does require the self-supporting structure of the tooth. Wear and breaking down of an old filling may allow additional decay of the tooth, resulting in an abscess or the need for a crown to seal off the entire tooth from further decay.

I DENTAL EMERGENCIES**What to do in the case of a dental emergency. . .**

Although accidents do happen, it is advisable to take precautions if engaging in a situation that may put teeth at risk, such as contact sports or recreational activities. Use of a mouth-guard may prevent a painful or costly injury from taking place. Other common hazards include chewing ice, hard candies, and using teeth for cutting inedible objects or as a force to pull or remove objects. Being thoughtful about teeth and recognizing the potential for injury may prevent unnecessary pain and cost.

If, however, a dental emergency does arise, here's what to do for . . .

A broken tooth - rinse the mouth with warm water to clean the area and use cold compresses to keep any swelling down. Call the dentist immediately.

A knocked-out tooth - holding the tooth only by its crown (not the root!), rinse the tooth gently if it is dirty, being careful not to touch the root or remove tissues. If possible, hold the tooth in its socket. If not, place the tooth in milk. Get to the dentist as quickly as possible and don't forget to bring the tooth!

Objects caught between the teeth - gently try to remove the object with a piece of dental floss, avoiding being rough on the gums. If the object won't budge with dental floss, contact the dentist.

Toothache - carefully rinse the mouth with warm water to clean the area. Gently floss between teeth near the painful area. Do not place an aspirin or other pain medications on the gums as the medication may burn the gum tissue. Contact the dentist if pain persists. Aspirin, acetaminophen, or ibuprofen may help with the pain if taken as needed while waiting to see the dentist.

ORAL HEALTH

Self Assessment

(to be completed after reading Oral Health content)

1. What causes tooth decay?
 2. What are the steps to good oral hygiene?
 3. What is plaque?
 4. What is gingivitis?
 5. What is baby bottle decay?
 6. How does an abscess form in the tooth?
 7. Why is it important to prevent baby teeth from getting tooth decay and cavities?
 8. How can a caregiver prevent baby bottle decay?
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ORAL HEALTH

Self Assessment

(continued)

9. What is the link between diet and dental health?

 10. How does fluoride help prevent tooth decay and cavities?

 11. What are the steps to deal with a knocked-out tooth?

 12. What is dental varnish, and why is it important for children?
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ORAL HEALTH

Self Assessment

(Answers)

1. What causes tooth decay?
[Tooth decay is caused by acid de-mineralizing the enamel of the teeth. Bacteria in the mouth feed on the sugars from food digestion and create acid as the by-product.]
 2. What are the steps to good oral hygiene?
[brush teeth twice per day, floss daily, visit the dentist regularly, eat a balanced and health diet, limit snacks, change toothbrushes every 3-4 months]
 3. What is plaque?
[Plaque is a sticky layer of bacteria that cover the teeth. If plaque is not brushed away, it may harden into tartar that contributes to gum disease.]
 4. What is gingivitis?
[Gingivitis is the early and reversible stage of gum disease. It is caused by gum irritation due to plaque and tartar on the teeth near gums. Common symptoms include red, swollen gums and/or gums that bleed easily during brushing.]
 5. What is baby bottle decay?
[Baby bottle decay is preventable tooth decay in infants and young children. It is often caused by poor oral hygiene habits among the caregivers/parents, such as putting children to bed with bottles containing juice or milk.]
 6. How does an abscess form in the tooth?
[An abscess is a pocket of pus in the pulpy root of the tooth where it meets the jaw. An abscess may result from a cavity deep in the tooth root or damage to the root. Although an untreated abscess could cause damage to the jaw bone, the condition is treatable through a root canal.]
 7. Why is it important to prevent baby teeth from getting tooth decay and cavities?
[Baby teeth are important for several reasons. Healthy baby teeth hold a space in the mouth for adult teeth to enter. Baby teeth are important for speech acquisition and their absence may cause speech impediments. They are important for eating and chewing; without baby teeth a child may be unable to eat age-appropriate foods. Finally, healthy baby teeth are important for self-esteem and because tooth decay can be painful.]
 8. How can a caregiver prevent baby bottle decay?
[Baby bottle decay is preventable! Caregivers should not put infants and children to bed with bottles filled with anything except water. Gums should be wiped with a moist cloth after eating, and new teeth should be brushed to encourage good oral hygiene as the child ages. If the child lives in an area that does not have systemic fluorine in the water, inquire of the pediatrician how much, if any, fluorine should be supplemented. Begin dental visits as early as the first birthday.]
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ORAL HEALTH

Self Assessment

(Answers continued)

9. What is the link between diet and dental health?
[Diet is important to dental health! Carbohydrates and sugary foods break down into simple sugars that feed bacteria and become acids. Another point to remember is that each time sugars become acid in the mouth, the mouth maintains its acidic environment for approximately 20 minutes. Snacking throughout the day results in a consistently acidic environment in the mouth.]
 10. How does fluoride help prevent tooth decay and cavities?
[Fluoride concentrates in both saliva and plaque, where it can inhibit the de-mineralization that results from acids caused by sugars. It also promotes re-mineralization of the weakened enamel. In addition, it inhibits the process by which bacteria in the mouth metabolize sugars into acids.]
 11. What are the steps to deal with a knocked-out tooth?
[Only hold the tooth by its crown, not the root. Gently rinse off the tooth, taking care not to touch the root or damage any tissue on the tooth. Either place the tooth back into the socket or place it in a cup of milk. Go to the dentist immediately, and don't forget the tooth!]
 12. What is dental varnish, and why is it important for children?
[Dental varnish is a temporary fluoride coating applied to baby teeth to prevent decay and cavities. It is significant because it can reduce the incidence of dental caries in children, and because it can offer a measure of protection to children who are unable to see the dentist regularly.]
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ORAL HEALTH

Teaching Objectives

The facilitator and farmworker participants will discuss:

1. What are common oral health conditions?

- a. Caries
- b. Gingivitis
- c. Periodontitis
- d. Baby bottle decay
- e. Abscess

2. What are preventive oral hygiene strategies?

- a. Brush twice daily
- b. Floss once daily
- c. Eat a balanced and healthy diet
- d. Visit the dentist regularly
- e. Limit snacks between meals
- f. Replace toothbrushes every 3-4 months
- g. Dental sealants or dental varnishes

3. What is so important about baby bottle decay?

- a. Tooth decay in infants and young children
- b. Reasons why baby bottle decay should be prevented
- c. Preventive measures

4. Explain some common dental procedures and emergencies?

- a. Fillings
 - b. Root canals
 - c. Sealants and varnishes
 - d. Extractions
 - e. Crowns
 - f. Emergencies
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ORAL HEALTH

Motivating / Learning Activity

The motivating / learning activity is an opportunity to support knowledge acquisition and comprehension among participants on a given health topic. These activities should be interactive and should begin to engage farmworkers in critical thought about the application of health information.

This is an opportunity to engage the group and to assess the comfort level and knowledge on the subject. You may find that the workers are very familiar with the topic and only require a review. Or, you may find that this topic is new or that there are misconceptions or mistaken ideas among the group. For this reason, it is a good idea to briefly note comments by the workers for further discussion.

A few suggested activities are:

- Cabbage game with questions related to oral health
 - Read *El Brillante* (the fotonovela) aloud, invite questions from the participants
 - Use photo of baby bottle decay teeth and invite workers to describe what they see, what they perceive the problem to be
 - Read *Manuel Goes to the Dentist* (from *Farmworker News*) and follow-up with discussion of oral health prevention and treatment
 - Use the “big-mouth” to illustrate proper brushing and flossing technique.
 - Use jeopardy game to review specifics about oral health (especially if the group seems familiar with the topic)
 - Use experiential method to illustrate tooth decay: hard-boiled egg in coca-cola or vinegar
 - Grab bag with items related to oral health in adults or children
 - Using red food coloring in water, have participants swish the solution in their mouths for 10 seconds and spit it out. Participants may examine each others’ teeth to see the areas of plaque that have been temporarily stained red. Have participants brush teeth paying attention to those areas and re-test with red-colored water to see improvement with more careful brushing.
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ORAL HEALTH

Empowerment Activity

The goal of an empowerment activity is to develop skills, learn a new task, consider action to change one's situation, and / or begin exploring how to help oneself.

This is an important opportunity to help farmworkers understand that dental conditions are preventable with a few simple oral health measures.

- Help participants explore their own perceptions of oral health - whether health is tied to appearance of teeth, the functionality of teeth, lack of pain, or other constructs.
- Remember not to chew or suck on anything that goes into a child's mouth, as bacteria that cause cavities could be passed from one person to another.
- Do they have toothpaste, new toothbrushes, floss, etc? Distribute free dental supplies if possible.

Teach oral health first aid for farmworkers:

- Knocked-out tooth
 - Toothache
 - Broken tooth
 - Object caught between the teeth
-

ORAL HEALTH

Sample Class Plan

Subject: oral health

Date:

Time:

Topic: What is so important about baby bottle decay?
(teaching objective 3 from oral health module)

Key points, information, skills or activities

As a result of this health education session, participants will:

1. Recognize that baby bottle decay is tooth decay in infants and young children.
2. List reasons why baby bottle decay should be prevented.
3. Plan steps to prevent baby bottle decay.

Teaching methods

Discussion
Brainstorming
Participatory reading
Grab bag game
Demonstrations
Storytelling

Materials and preparation needed

Large sheets of paper and writing instrument
"big mouth" with toothbrush
Floss
Tooth or hard-boiled egg
Cola or vinegar
Cup
Grab bag items
Prepared cabbage game

Supporting media

Language and reading-level appropriate brochures or flyers to distribute NCFHP approved content in case of questions

Sample Class Plan: Oral Health curriculum - 2

To begin, invite participants to reflect on personal experiences with oral health issues. What do they already know about the topic? What would they like to learn?

1. Recognize that baby bottle decay is tooth decay leading to cavities in infants and young children.

- Baby bottle decay is a serious but preventable condition.
- Lack of consistent oral hygiene and behaviors that allow sugars to remain on teeth are the primary causes.
- Infants and young children get cavities by the same mechanism as adults - through acid activity resulting from sugar and bacteria.

▼ Learning activities

- Illustrate that although teeth are strong, they are readily weakened by exposure to acids and sugars through a demonstration of the effects of soda or vinegar on a hard-boiled egg.
- Read the fotonovela, 'El Brillante,' with participants and discuss how young children's teeth can get cavities just as permanent teeth do.
- Use a grab bag of items that could cause baby bottle decay (bottle with milk, juice, candies, pacifier dipped in sugar) to facilitate a discussion of what puts infants at risk of cavities.

2. List reasons why baby bottle decay should be prevented.

- Although baby teeth fall out, they are still important and should be cared for.
- They allow children to chew and eat adult foods.
- Baby teeth help children learning to talk to speak clearly and form words well.
- They retain a space in the mouth for permanent teeth without crowding.
- Healthy baby teeth support a child's self confidence.
- Baby teeth aid in jaw and facial structure formation.

▼ Learning activities

- Invite participants to "shout - out" the reasons why an infant's teeth are important.
- Offer clues or a timeline to assist participants in figuring out the reasons. For example, indicate that reason #1 becomes important at around 6 months of age [chewing food], reason #2 becomes important in most children from 18 months onward [learning to speak], et cetera. Record the ideas on a large sheet of paper or board.
- Ask the participants if any have ever had a toothache or cavity. Invite the individual to share his/her experience, how it felt, how it affected daily life. Write the main points on a large sheet of paper.

3. Plan oral hygiene strategies for infants and young children to help prevent baby bottle decay.

- Parents or caregivers should wipe baby's gums with a soft cloth after feedings to remove sugary residues from milk.
 - As soon as teeth begin to come in, it is time to begin brushing. Parents should assist children in brushing every time, as children are unable to perform an adequate cleaning on their own.
 - At the age of three, children's teeth should be flossed.
 - It is essential that parents not put children down for naps or to bed with milk or juice, only water.
-

Sample Class Plan: Oral Health curriculum - 3

- If possible, dental varnishes are a great way to help prevent cavities.
- Finally, children should begin seeing the dentist as early as 12 months in age.

▼ **Learning activities**

- Use the big mouth to demonstrate proper brushing and flossing techniques.
- Discuss with participants alternatives to get a child to sleep besides using a bottle of milk or juice at bedtime. Note the ideas on a large sheet of paper.
- Use a grab bag with items such as a washcloth, toothbrush, bottle of water, bedtime book, can of soda, formula, and others to invite discussion.
- Use the big mouth and a paint brush to demonstrate the application of dental varnish.

Suggested review activities (choose one or two)

- play the cabbage game with a variety of questions to assess learning
 - ask if there were any points that were unclear
 - invite questions from the group
 - distribute written/pictorial materials to reinforce the information learned
-

ORAL HEALTH

Support for Learning Activities

These are a few suggested questions for the cabbage game. Feel free to write your own questions in addition to or instead of these. If the question is true/false, have the worker or another participant restate the sentence so that it will be true.

- What is plaque?
- What does plaque have to do with dental decay?
- What is a cavity?
- How can cavities be prevented?
- What is baby bottle decay?
- Why are baby teeth important?
- What is the early stage of gum disease?
- What steps should be taken if a tooth gets knocked out?
- What is an abscess?
- Frequent snacking may contribute to dental decay. True or false?

List of follow-up questions for fotonovela, photograph or case study activity:

- Why did Manuel go to the dentist?
- What happened at the dentist's office?
- How could Manuel have prevented getting a cavity?
- What are some warning signs of a cavity?
- What did Manuel learn while he was at the dentist?
- What did you learn from the story?
- What can you do to prevent getting a cavity?

If using a photograph or case study to initiate discussion and workers identify other conditions besides the target health education topic, the facilitator may say: 'That is one problem that _____ may experience, but that isn't the problem today. What other conditions/problems can cause _____ to look or feel this way?'

Possible Jeopardy questions (with suggested point values):

- 100 : Only children get cavities. True or false?
 - 100 : Baby teeth are not important so it doesn't matter if they get cavities or decay. True or false?
 - 100 : How often should teeth be brushed each day?
 - 200 : What is plaque?
 - 200 : How is food related to dental decay?
 - 200 : What is gingivitis?
 - 300 : How can baby bottle decay be prevented?
 - 300 : What is an abscess?
 - 300 : What should be done in the case of a knocked out tooth?
 - 400 : What is gum disease?
 - 400 : How can dental decay and cavities be prevented?
 - 400 : How are acids produced in the mouth?
 - 500 : Name three ways that fluoride is commonly obtained.
 - 500 : What is the difference between topical and systemic fluoride?
 - 500 : Which teeth are most susceptible to cavities?
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ORAL HEALTH

Recommended Resources for Outreach Workers:

- ◆ Fotonovela **El brillante: protecting your children's teeth**
Novela Health Education
2001
6 pages each English/Spanish
Farmworker families with children

This black and white fotonovela is an appropriate teaching tool for use with both male and female farmworker parents. The story is broken into three themes: the dangers bedtime bottles containing anything except water, the importance of dental care for baby teeth, and taking advantage of school-provided dental services for children. There are also a few useful tips for parents to facilitate their involvement in children's dental health. Children will enjoy a maze in the center of the novela.

Order form available at: http://www.kdna.org/novela_health_education.htm

- ◆ Article **Toothbrushing: keeping your child's teeth healthy**
Farmworker News Vol 7 Issue 4
Summer II 2001
1 page; 2 columns English/Spanish
Outreach workers, farmworkers

This brief article addresses the need for parents to model healthy dental habits for young children. The tips are focused on establishing the habit of brushing, rather than the proper techniques. Although somewhat repetitive, this could be useful as a supporting handout for new parents or those who need convincing that the time spent caring for baby teeth is important.

Available online at www.ncfh.org

- ◆ Article **Manuel goes to the dentist**
Farmworker News Vol 8 Issue 3
Summer I 2002
1 pg English/ Spanish
Outreach workers, Farmworkers

Manuel and his wife Margarita discuss Manuel's visit to the dental clinic for tooth pain. Manuel describes the course of his visit at the dentist, including the x-ray, discussion of the pain, the oral examination and needing to make a new appointment to have the cavity treated. Manuel shares with Margarita how cavities form, the common causes of cavities, and the signs and symptoms of tooth decay. Finally, there is brief mention of preventive dental care, including brushing, sealants, healthy food choices, flossing and regular dental appointments. This tool could be useful as a case study or by having individuals read the dialogue aloud.

Available online at www.ncfh.org

Recommended resources for outreach workers: Oral Health curriculum - 2

♦ Article **Growing up with healthy smiles**

Farmworker News Vol 8 Issue 3
Summer I 2002
1 pg English/ Spanish
Outreach workers, Farmworkers

Carmen and Alicia discuss baby bottle decay in this brief dialogue. The content addresses the disconnect between children's need for milk for growing bones, and the potential damage it can cause if children are put to bed with milk bottles. The women discuss why baby teeth are important, the cause of baby bottle decay, the drinks that risk decay, and strategies to prevent baby bottle decay in infants. This tool could be used as a group case study or as a dialogue to be read aloud by participants.

Available online at www.ncfh.org

♦ Article **Tooth Brushing**

Farmworker News Vol 8 Issue 3
Summer I 2002
1 pg English/ Spanish
Outreach workers, Farmworkers

This one page tip sheet offers easy steps for keeping teeth and gums healthy, describes and illustrates how to brush teeth and floss, and reiterates the need for parents to assist young children who are often unable to brush adequately on their own. The tips are useful and not overly prescriptive – the authors acknowledge that there are many different brushing styles, and most are equally effective. This tool could be a strong support piece to give farmworkers to reiterate a health education presentation or discussion.

Available online at www.ncfh.org

Information about dental varnish for children is available online at:
<http://www.ncafp.com/imb/tools.html>

♦ Booklet **Your child's teeth**

American Dental Association
1997
13 pages; English
Outreach workers, some farmworker parents

This booklet offers a thorough discussion of many of the issues related to children's oral health and would be a good support for outreach workers' knowledge. The format is heavy on text, however, and the reading level is higher than most brochures and pamphlets. There is a tooth eruption chart with the typical ages for both eruptions and losing teeth. There is some discussion of clinical preventive measure such as fluoride and sealants.

For additional copies, call 1-800-947-4746

Recommended resources for outreach workers: Oral Health curriculum - 3

◆ Booklet **A healthy mouth for your baby**

National Institutes of Health, National Institute of Dental and Craniofacial Research
2002
8 pages; English or Spanish
Farmworker parents

This booklet is written to a low reading level and is well-balanced between images and text. The most important topics are covered in simple-to-understand language. Five main points are highlighted and expounded upon for parents.

◆ Brochure **Healthy teeth, happy smiles**

The Children's Health Fund
Available online at: <http://www.childrenshealthfund.org/publications/healthed.php>
1 page, front and back; English and Spanish
Written for children.

Lukes SM, Miller FY. **Oral health issues among migrant farmworkers.**
J Dent Hyg. 2002 Spring;76(2):134-40.

A study whose stated purpose was "to determine utilization patterns of dental services, unmet dental needs, access to care barriers, and oral health behaviors as perceived by migrant farmworkers at a rural southern Illinois farmworker health clinic. The study found that a majority of the migrant farmworkers in this community reported access to care barriers, and either having never or infrequently received dental services. Among the participants, nearly half reported signs of periodontal disease such as bleeding gums and tooth loss.