

# Lesson 2: Save your Smile from Tooth Decay

## OVERVIEW

### Objectives:

By the end of the lesson, the Lay Health Worker will be able to:

1. Describe what tooth decay is and how it happens.
2. State the causes and types of tooth decay.
3. List the signs and symptoms of tooth decay.
4. Talk about ways to prevent tooth decay.

### Estimated Time:

1 hour, 15 minutes

### Materials:

- Overhead Projector
- Overhead transparencies (OHT)
- Handouts (H)
- Easel paper/newsprint paper
- Easel
- Markers
- Tape
- Several bruised apples (optional)
- Knife (optional)

### Lesson Outline:

- Topic 1: What is Tooth Decay?
- Topic 2: Causes of Tooth Decay
- Topic 3: Signs and Symptoms of Tooth Decay
- Topic 4: Types of Tooth Decay
- Topic 5: Preventing Tooth Decay
- Topic 6: Summary

# Save your Smile from Tooth Decay

## LESSON

### ACTIVITY 1

#### Participant Testimonial

**Materials:** none

**Time Limit:** no more than 15 minutes

1. Ask the group for 1 or 2 volunteers to share a personal story about tooth decay/cavity, whether it was them or one of their family members. Ask them how it felt physically, how it felt emotionally, and what they did about it.
2. Ask the participants how they think this could have been prevented?
3. Encourage the participants to ask questions.
4. Once they are done, let the participants know that in this lesson they will learn about the different types of tooth decay, and how they can be prevented.

Presentation of Objectives:

#### **Display and Review OHT 1: Lesson 2 Objectives**

##### **Objectives**

By the end of the lesson, the Lay Health Worker will be able to:

1. Describe what tooth decay is and how it happens.
2. State the causes and types of tooth decay.
3. List the signs and symptoms of tooth decay.
4. Talk about ways to prevent tooth decay.

Topic 1: What is Tooth Decay?

##### ***Read the following:***

Most people do not think about tooth decay. Although, it usually happens in children and young adults, it can happen to anyone. Tooth decay can start as soon as a tooth shows up in a baby's mouth and can go on for the rest of life. Anyone can get tooth decay as long as there are natural teeth in the mouth.



DISPLAY



READ



ASK



DISPLAY



DISTRIBUTE



READ

**Ask the following questions:**

- ❖ Can someone tell me what tooth decay is?
- ❖ Can someone tell me what another common word for tooth decay is?

So that we can understand what tooth decay is, we first need to learn what our teeth are made of.

**Display and Review OHT 2 and Distribute H 1: Tooth Anatomy** (*Leave this up as you go over the following section and point to the parts as you talk about each one or you can use a tooth model if you have one.*)

**Read the following:**

The part of the tooth that you see when you look in your mouth is called the **crown** (but not the type of crown that a dentist puts in your mouth). The top part of the crown is used to chew food. The crown is made of a layer that protects the teeth called **enamel**. Enamel is the hardest material in the body and has the most minerals. Just under the enamel is **dentin**, a material that is harder than bone. Dentin has nerve endings that make us feel pain. The **gum** surrounds the bottom of the tooth.

The **root** of the tooth is made of blood vessels and nerves. The root goes all the way down into the jawbone and gives movement and feeling to the tooth. The tooth sits in an opening in the bone called the socket.

The **jawbone** holds all the teeth and gives support and movement for the mouth and teeth for chewing. Now we are going to talk about how tooth decay affects the teeth.

- Tooth decay is a process that destroys the minerals that the tooth is made of and forms a hole (or cavity) in the tooth.
- Tooth decay usually starts on the parts of the teeth we use to chew or bite, between the teeth and on the roots of teeth.
- Tooth decay can spread all the way to the nerve found inside the tooth.

## ACTIVITY 2

### Demonstration of the Tooth Decay Process

**Materials:** several bruised apples, knife

While you talk about the tooth decay process below, cut an apple through a bruise to show the group how the bruise spreads through the apple.



READ

**Read the following:**

HOW TOOTH DECAY HAPPENS

- Tooth decay is like an apple with a bruise or a tiny brown spot. The spot spreads through the apple and gets bigger and deeper, until it covers and spoils the whole apple.
- Tooth decay can spread through the tooth in the same way. But it can be treated if it is found early.

Topic 2: Causes of Tooth Decay

**Ask the following question:**

- ❖ Can anyone tell me what causes tooth decay?

**Display and Review OHT 3: Tooth Decay**

- Germs you cannot see, called bacteria, live in your mouth all the time.
- Some of these bacteria form a sticky film or coating, called plaque, which sticks to the teeth.
- The bacteria use food, like sugars and starches, to make acids.
- The acids in the plaque destroy the enamel on the top of the tooth and form cavities.
- This can cause an infection in the tooth and can spread to other parts of the mouth, face or body.

Topic 3: Signs and Symptoms of Tooth Decay

**Read the following:**

Let's start by talking about the difference between signs and symptoms.

A **sign** is something you **see**, like bleeding or swelling, or it can be something you **measure** like temperature.

A **symptom** is something you **feel**, like dizziness, nausea or pain.

**Ask the following questions:**

- ❖ Do any of you know someone who has had a cavity?
- ❖ Have any of you had a cavity before?
- ❖ How did you find out?

**Display and Review OHT 4 and Distribute H 2: Signs and Symptoms of Tooth Decay**

?

ASK



DISPLAY



READ

?

ASK



DISPLAY



DISTRIBUTE

The first sign of tooth decay is a chalky white spot. As it grows, it can become a dark spot or a hole. This can happen on any part of a tooth or between two teeth. This makes some cavities really hard to see.

- Sharp, dull or throbbing pain
- Pain when food gets caught inside a hole on the tooth
- Pain when drinking something cold or hot
- Pain when eating something sweet
- Trouble chewing food
- Sensitive or sore teeth
- A bad taste or smell in your mouth
- Swelling in the mouth or the gums next to a tooth
- Swelling that may form a sore with pus
- Swelling of your face



READ

***Read the following:***

Did you know that many times most cavities do not cause pain or that some can only be seen with an X-Ray? People are surprised when they learn they have cavities, because they don't have any signs or symptoms. This is because the cavity is on the outside part of the tooth, called the enamel. The tooth may begin to get sensitive only when the cavity enters the inside of the tooth, or the dentin. This is where there are nerve endings that make us feel pain. That is why it is important to have regular dental visits, so that the tooth decay can be found and treated early before there is any pain.

## Topic 4: Types of Tooth Decay

***Read the following:***

There are five types of tooth decay:

- Baby Bottle Tooth Decay
- Tooth decay on the crowns of teeth
- Tooth decay on the roots of teeth
- Recurrent tooth decay
- Tooth decay from dry mouth

Let's look at each of these a little more closely.

**Display and Review OHT 5 and Distribute H 3: Types of Tooth Decay**



DISPLAY



DISTRIBUTE

➤ ***Baby Bottle Tooth Decay***

- Tooth decay in infants and children is called Baby Bottle Tooth Decay.
- It is a dental problem that can destroy the teeth of a young child.
- It happens when the teeth are always in contact with drinks that have sugar, like juice, juice drinks, soda, milk, and formula.
- It often happens in the upper front teeth, but it can happen to any tooth.

**Note to the trainer:** Baby Bottle Tooth Decay is a very common type of tooth decay among children, and it can be easily prevented. This is why, we will learn more about it in Lesson 5.

➤ ***Tooth Decay on the Crowns of Teeth***

- The crown is the part of the tooth that is above the gums and can be seen when you look in your mouth.
- Tooth decay often happens on the sides of teeth or in between teeth.
- Tooth decay also happens on the biting or chewing surfaces of teeth.
- This type of cavity happens because it is hard for the toothbrush to clean these areas well. The acids in plaque that are not removed by the toothbrush destroy the tooth.

➤ ***Tooth Decay on the Roots of Teeth***

- The roots of teeth are found underneath the part of the gums that we cannot see.
- As a person gets older, their gums may separate from their teeth. This leaves the roots of the teeth showing.
- The outer layer of the root is soft. If the gum is not there to protect it, this area is more likely to decay.
- Tooth decay on the crowns of the teeth that is not treated may get worse and spread to the roots of the teeth. The roots can get damaged and may even die. The only way to save the tooth may be a root canal, a procedure that saves the damaged or dead root. Ask your dentist for more information.

➤ ***Recurrent Decay***

- Recurrent decay is when you have a cavity in the same place more than one time.
- A recurrent cavity can happen around places that already have a filling or areas that have an artificial or replacement crown on them.
- There is more chance for a cavity to form because these areas are not as smooth as the natural tooth. So plaque can easily form on these areas and cause decay.

➤ ***Tooth Decay from Dry Mouth***

- Dry mouth is when there is not enough saliva in the mouth.

- Saliva is important because it has minerals that help make the teeth strong.
- Saliva also helps wash your teeth and get rid of the acids that cause tooth decay.
- When there is not enough saliva in the mouth to wash the teeth, there is a higher chance of decay.
- Dry mouth may be caused by:
  - ❖ Side effects of some medicines, like those used to treat high blood pressure and depression.
  - ❖ Diseases like diabetes and HIV/AIDS.
  - ❖ Chemotherapy and radiation therapy for cancer treatment.
- Talk to your dentist if you have a dry mouth.

## Topic 5: Preventing Tooth Decay



ASK

### Ask the following question:

- ❖ How can you prevent tooth decay?



READ

### Read the following:

People used to think that as you got older you naturally lost your teeth. Now we know that this is not true.

You can prevent tooth decay by brushing your teeth with fluoride toothpaste, using dental floss and getting dental sealants. Making healthy food choices and having regular dental visits also helps prevent tooth decay. We will talk more about these in the following lessons. First, let's talk about fluoride and dental sealants.



ASK

### Ask the following question:

- ❖ What can you all tell me about fluoride?



DISPLAY

### Display and Review OHT 6: Fluoride

Fluoride helps prevent tooth decay in both children and adults. Fluoride is a mineral that is found in our bodies, mostly in our teeth and bones. You can also find fluoride in tap water, toothpaste, and mouthwash. Drinking tap water with fluoride is an easy and cheap way to prevent tooth decay. Regular brushing with fluoride toothpaste also helps prevent tooth decay. You can also use mouthwash with fluoride or your dentist can also put fluoride on your teeth during a visit. We will be talking about brushing and flossing in the next lesson.



ASK

### Ask the following question:

- ❖ How does fluoride protect us from cavities?

Fluoride:

- Makes teeth stronger.
- Fixes small areas of tooth decay before they become bigger cavities.
- Weakens some germs in the mouth so it is harder for them to cause tooth decay.



READ

***Read the following:***

Fluoride works best on the smooth surfaces of teeth, like the sides, front and back of the teeth. However, the chewing surfaces on the back of the teeth are rough and uneven because they have tiny grooves. Food and germs can get stuck in the grooves and stay there a long time because the toothbrush cannot remove them. This is when tooth decay often begins. But dental sealants can be used to prevent this from happening.



ASK

**Ask the following question:**

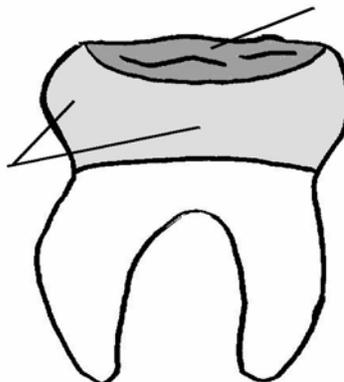
- ❖ Has anyone heard of dental sealants before?
- ❖ What are they?

**Display and Review OHT 7: Dental Sealants**

- Dental sealants are thin, plastic coatings that are painted on the chewing surfaces of the back teeth. They seal the tooth to prevent bacteria from getting in and forming a cavity.
- Most tooth decay in young children and teens happens on the parts of the teeth used for chewing.
- Dental sealants are painted on the teeth as a liquid. The liquid gets hard fast to help protect the teeth by putting a protective covering over them.
- Dental sealants can be put on in dental offices, clinics, and sometimes in school dental programs.

Dental sealants protect the biting or chewing surfaces of the teeth.

Fluoride protects the sides of the teeth.



DISPLAY



READ

**Read the following:**

Eating healthy and seeing your dentist regularly is important, not only so you won't get cavities but for your overall dental health. The kinds of foods you eat are important in keeping your body healthy and strong and help your body fight infections. Going to the dentist every six months, is important in keeping your teeth and gums healthy. By going to the dentist regularly, the dentist can find and treat a cavity early, before you may feel any pain. We will talk more about eating healthy and dentist visits in Lesson 4: Protect Yourself Against Gum Disease.

## ACTIVITY 3

### Brainstorm: Barriers to Dental Health

This activity will give the participants an opportunity to talk about barriers that exist in the community that prevent people from having good dental health and how lay health workers can respond to them.

**Materials:** easel Paper/newsprint paper, markers, tape

**Time Limit:** 10 minutes

1. Ask the following questions and write them on the easel paper:
  - Do you think poor dental health is a problem in your community?
  - Why do you think people in your community do not have good dental health?
  - What keeps people from going to the dentist?
  - Why do you think people do not like to talk about their dental health?
2. Make two columns on the easel paper/newsprint paper: one for barriers, the other for solutions.
3. Write down the barriers under the barrier column and the solutions under the solutions column.
4. You may want to bring up barriers that are not included and talk about those. Other barriers might include: poor diet, no access to dental services.
5. Brainstorm with the participants about the different ways that people in the community can overcome these barriers and what role lay health workers can play. *(For example: If poor diet is mentioned, the lay health worker can give some tips on how to choose healthy snacks and eat a balanced diet or if they bring up something. If they mention that they do with not having the money to pay for dental care, then the lay health worker can provide the participants with a list of low cost dental clinics in the area.)*

**Note to the trainer:** Let the participants know that you will be talking more about dental visits in Lesson 4.

## Topic 6: Summary

### **Display and Review OHT 8: Summary Points**



DISPLAY

- ✓ Tooth decay is a process that destroys the minerals that the tooth is made of and makes a hole in the tooth.
- ✓ Tooth decay is caused by bacteria in plaque, which turns sugar from food into acids. These acids break down the tooth enamel to form a cavity.
- ✓ Tooth decay may form on the crowns or roots of the teeth.
- ✓ Tooth decay starts as a chalky white spot and as it spreads, becomes a dark spot or a hole.
- ✓ Signs of tooth decay may include tooth pain, swelling or sores on the gums.
- ✓ Other signs of tooth decay include bad taste or smell in the mouth, trouble chewing food, or sensitive teeth.
- ✓ You can prevent tooth decay by drinking tap water with fluoride, brushing your teeth with fluoride toothpaste, flossing, getting dental sealants, eating healthy and going to the dentist every six months.