

Name _____ Date _____

DENTAL HEALTH

In February, the United States celebrates Children's Dental Health Month. Children are encouraged to learn more about their teeth, including their structure, how they work, and the basics of good dental care.

There are four kinds of teeth: *incisors*, *canines*, *premolars* and *molars*. Incisors are the front teeth: four on the top and four on the bottom. Incisors have straight, sharp edges for biting and cutting food. Next to the incisors are the *canine* ("dog") teeth. The canine teeth are also called cuspids. A cusp is a point, and these teeth have one point each. They are used for tearing and biting. There are four canines: two on top, and two on the bottom. Beyond these canines are teeth with two points, bicuspid, which are premolars to grind and chew food. There are two on each side of the mouth, top and bottom, totaling eight. These are the 20 teeth in a young child's mouth. These baby, or milk, teeth will be replaced with permanent teeth, beginning on average when the child is six years old, and continuing until about age 13. Permanent teeth are also referred to as secondary teeth. Eight permanent molars, two on each side, top and bottom, complete the adult mouth. Most people will also grow four additional molars, one at each end of each row of teeth, called *wisdom teeth*. Wisdom teeth appear between the ages of 17 and 21. Sometimes there is no room in the mouth for these teeth and they need to be removed. An adult will have 32 teeth if the wisdom teeth are not removed.

At about age six, permanent teeth begin to replace the baby teeth. The baby tooth's root begins to dissolve, and the permanent tooth pushes the baby tooth out of the way as it grows. The first teeth to fall out are usually the lower two on the bottom, followed by the upper front teeth.

The outer "skin" of the tooth is the *enamel*. Enamel is harder than bone, making it the hardest substance in the human body. Although it is very hard, it is not immune to decay, which is caused by bacteria or plaque. Plaque is caused when bacteria sticks to the teeth in a thin film, most commonly between the teeth and at the gum line, where the teeth and gum meet. Bacteria give off acids that eat into the enamel, forming *cavities*, or holes. The cavity will grow larger as more bacteria and food get into the hole. If left untreated, the cavity can reach into the soft inner layer of the tooth, the *dentine*. Growth of the cavity is rapid here, and causes pain. If a cavity is not filled, the tooth may become infected and die.

The layer under the dentine is called the *pulp*. It contains the nerves and blood vessels. These travel into the jaw through the *root canal*. The roots of the tooth anchor it to the jaw.

The risk of cavities can be reduced by simple measures. The easiest thing to do to reduce the risk of cavities is to brush and floss. Brushing first thing in the morning or after breakfast is especially important, because during the night the teeth are more susceptible to decay. This is because during the day saliva helps rinse

Name _____ Date _____

bacteria away, and the saliva decreases at night. Brushing the tongue removes a lot of bacteria, too. Regular dental examinations are also encouraged.

Brushing with toothpaste that contains fluoride is a good choice for most people. Fluoride is added to many brands of toothpaste, but not all, so read the labels. In some areas of the U.S., fluoride occurs naturally in water or is added to drinking water. Most dentists believe that a pregnant woman should drink fluoridated water, as a baby's teeth are formed before birth.

Another measure in good dental health is fluoride treatments at your dentist. This is a simple procedure where fluoride gel is painted onto the chewing surfaces of the teeth and left to sit for a few minutes. Some people find this procedure unpleasant, as you can't swallow during the time the fluoride is on the teeth, but it has been shown to greatly reduce the number of cavities. A dentist may also seal the chewing surfaces of teeth. This fills in the pits and dips in the molars, chewing back teeth, insuring there are no low surfaces for food particles to get caught in. Sealing and fluoride treatments are very important parts of dental health, and most dentists perform these services. If you do not have a dentist, check with a local dental school, where the students may perform these procedures, under the direction of an instructor, for a very low cost.

Teeth benefit from good nutrition as well as dental care. They can become stronger from the inside with a healthy diet. Like bones, teeth need calcium for strength. Dairy products are healthy for your teeth and bones. Teeth also need vitamins C and D, and phosphorus. Too many sweets, as well as starchy items, such as crackers, which stick to the teeth, cause a rapid growth of bacteria, and should be limited, especially if you are not able to brush afterwards. This rapid growth of bacteria lasts approximately twenty minutes, and is called a "plaque attack."

The toothbrush you choose matters. Brushes should have soft bristles. It is not necessary to replace your brush if you have been sick. Toothpaste contains detergents that kill germs. Toothbrushes with worn bristles should be replaced; they can't do the job efficiently. You should replace your brush every three months.

You might not give much thought to your teeth, other than brushing them a few times a day, and visiting your dentist once in a while, but you should. Your secondary teeth only come in once, and they have to last your entire life! Remember them all year long, not just during Children's Dental Health Month.

Name _____ Date _____

Answer the Following Questions about Dental Health:

1) What are the four kinds of teeth?

2) What is the outer “skin” of the teeth called?

3) What causes cavities?

4) How many milk, or baby, teeth are there?

5) How many teeth will an adult have, including wisdom teeth?

6) What are some steps to make sure your teeth stay healthy and strong?

7) What procedures can your dentist do to help protect teeth from decay?

8) Why is it especially important to brush your teeth first thing in the morning?

9) What is the hardest substance in the human body?

10) What part of the tooth is the *dentine*?

11) Where are the nerves and blood vessels in a tooth?

12) What are some of the nutrients teeth need?

Name _____ Date _____

Answers:

- 1) incisors, canines, premolars and molars
- 2) the enamel
- 3) bacteria gives off acid that damages the enamel
- 4) 20
- 5) 32
- 6) brush, limit sweet or starchy snacks, get dental check-ups, eat a healthy diet
- 7) seal the molars and fluoride treatments
- 8) saliva helps wash bacteria away and when you sleep there is less saliva to do that
- 9) tooth enamel
- 10) the soft inner layer of the tooth, where decay happens rapidly
- 11) the root canals, in the root
- 12) calcium, vitamins C and D and phosphorus

Name _____ Date _____

DENTAL HEALTH ACTIVITIES

PLAQUE EXPERIMENT

Plaque is a germ, or bacteria, in our mouths. When we eat, plaque reacts and causes acid. This is a “plaque attack”, and the acid can damage and decay our teeth. How do we get rid of plaque? Brush, brush, brush!

This experiment will demonstrate how a “plaque attack” occurs. Yeast will be used to represent plaque, since both are a kind of live bacteria. A “plaque attack” in your mouth lasts for about 20 minutes after you eat. That is why you should brush your teeth right after a meal or snack, especially one that contains sugar or starch.

- 2 plastic cups
- 2 teaspoons dry yeast
- 1 tablespoon sugar
- 1 cup warm water

Place 1 tsp. yeast into each cup. Put sugar in one of the cups. Stir $\frac{1}{2}$ cup warm water into each cup.

Wait 10 minutes.

Notice the foam forming in the cup with sugar. The other cup will show a little growth, but much less. When sugar mixes with bacteria, the bacteria grows, making acid that attacks the teeth.

Remember, brushing gets rid of plaque!

HOW SERIOUS IS A SODA?

- Clear jar, such as an empty baby food jar
- Regular, not diet or special flavored cola drink
- A tooth (ask the students to bring in lost baby teeth)

Place the tooth in the jar and pour in cola to fill. Put the lid on and set aside for at least one week.

At the end of the week, notice how the tooth is starting to dissolve! Sodas, especially colas, have a high sugar and acid content that chemically affect tooth enamel. Your teeth do not remain in soda continually for a week, but over time the enamel surface can become damaged. So, brush after drinking sodas, or better yet, drink water!

Name _____ Date _____

CHART YOUR CLASSMATE'S TEETH

(This activity is best done in grades where most of the children have lost at least one tooth.)

Have the children take a survey of the children in their class, with the following questions. Have them individually chart the results on a simple graph.

How many teeth have the children in the class lost?

How many have loose teeth now?

Looking at the results, who has lost the most teeth?

MOUTH MODELS

Pink construction paper

Small dried lima beans

Large dried lima beans

Glue

Scissors

Small hand mirrors

Cut the paper into circles approximately 4" in diameter. This will be the mouth.

Have each child look in a mirror to observe their teeth. Note which are baby teeth, which are adult teeth and where there are spaces with missing teeth.

Fold the paper circles in half, they should resemble mouths. Open flat again.

Glue in lima beans to represent the teeth. Leave a space with no lima beans wherever there is a missing tooth. Large lima beans are for permanent teeth, the small limas are for the baby teeth.

Try to set the beans upright, like teeth. This might be easier if you help the students use a hot glue gun.

Lay flat to dry.

Fold in half. Now you have a personal model of your mouth! Mark the date to help you remember.

TOOTH PRINTS

Styrofoam cups

Remove the bottoms from the cups. Flatten the remaining "tube" slightly, and place in the mouth, biting down hard enough to leave prints, but not through the Styrofoam. The teeth will have left semicircles on the cup.

Can the students see how each tooth is made perfectly for the job it has? The canine teeth make the deepest marks, the molars the shallowest.

Tooth prints can be used by police to identify individuals. Everyone has a unique bite.