

FROM THE DESK OF DR. REBECCA KING

Good oral health is apart of good overall health. What you eat and drink plays an important role in good oral health. One of the key components to being healthy is to have a nutritious and balanced diet. A well-balanced diet provides our bodies with the nutrients needed to build and maintain healthy bodies including teeth and gums. When you add good dental hygiene practices and regular dental visits, we have given ourselves the best opportunity to prevent tooth decay and gum disease. This edition of Dental Bytes provides information to

assist school faculty and staff to help students learn about why it is important to eat healthy foods to keep teeth and gums healthy and to reduce dental decay. Promoting and providing healthy food options for optimal dental health is also good for overall health. We are partnering with the N.C. Immunization Branch to remind everyone about the importance of getting a flu vaccine and taking simple preventive steps to keep the flu from spreading. Stay healthy by eating nutritious foods and by getting your flu shot.



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FOR YOUR DENTAL HEALTH

What is Dental Biofilm?

It seems like more commercials about oral hygiene products are talking about biofilm. So what is dental biofilm? Dental biofilm is the beginning stage of forming dental plaque. It is natural to have bacteria growing in the mouth. The bacteria will attach to and begin growing on the tooth surface. As bacteria grow on teeth, it forms what is commonly known as dental plaque. So basically,

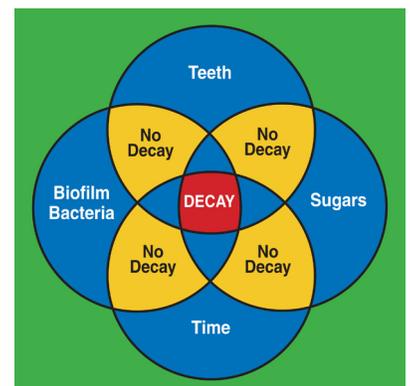
dental biofilm is dental plaque. This is a completely natural process that occurs within our mouths on a daily basis. Plaque is a sticky, clear film that builds up on the teeth and contains communities of bacteria. When plaque is exposed to food products with sugar, it produces an acid that can lead to cavities and gum disease. Dental plaque is found mostly between the teeth and near or under the gum line. If not removed, over time the acid dissolves the tooth enamel and causes cavities. Acid may cause gums to become red, swollen and/or even bleed easily. This is the early stage of gum (periodontal) disease.

waste products and fights bacteria in the mouth that can lead to cavities. Chewing is the most efficient way to stimulate the flow of saliva in the mouth. The movement of the tongue and cheeks can help remove plaque but this is not as effective as brushing and flossing each day. It is also important to get regular dental care.

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Plaque can be removed from the tooth by saliva, movement of the tongue and cheeks or by brushing and flossing. The best ways to prevent the build up of dental plaque is to remove it by brushing twice a day with fluoride toothpaste and flossing once a day. Flossing helps to remove plaque and biofilm from between the teeth. Saliva helps to build and maintain the health of our teeth and mouth. It removes



Eating a balanced diet low in sugar can help to reduce the build up of plaque on the tooth. Choose foods from each of the major food groups. Limit sugary snacks like candy, raisins, dried fruit, pastries, breads, sodas, sweet tea and

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juice. Instead, select low fat cheeses, raw vegetables, plain yogurt, a piece of fruit, nuts or popcorn. Drink at least eight cups of fluoridated water to hydrate the body and help to prevent cavities. While most people enjoy sweet snacks, the sugar will interact with plaque and form acid. Acid remaining on teeth for 20 minutes can lead to tooth decay. Try to avoid sipping on a sweet drink throughout the day because each sip will restart the 20 minutes of acid attacking the tooth. It is best to have your drink and then change to water if you want something to sip on throughout the day.

Candy is sometimes given as a reward to students and they may snack on it throughout the day. Their teeth are under attack from the acid for 20 minutes after each piece of candy. One way to give a reward to students and help prevent exposure to sugar is to replace the candy with items like pencils, erasers, stickers, or seasonal gifts from the dollar store. These can be enjoyed longer and taken home to show to family members. Older students might enjoy special privileges such as extra computer or recess time.

As we move into the holiday time of year with tempting sweets just remember:

- Limit your sugary foods and drinks.
- Eat a balanced diet and snack wisely.
- Brush and floss daily to remove plaque (dental biofilm).
- Get regular dental care.

Healthy Living Standard Course of Study Competency Goals: Kindergarten, 4.02, 4.03; Grade 1, 4.03, 4.04; Grade 2, 4.02; Grade 5, 4.02; Grade 6, 4.06, 4.07; High School 4.08

Science SCOS and Grade Level Competencies: Grade 4, 4.03.

IN THE SCHOOLS

Keep the Flu Out of School

It may seem odd for a newsletter about dental health to have an article about preventing the spread of the flu. But since most of our staff work in public schools, they have seen the effect the flu can have on the students and staff. A couple of years ago, due to the high rate of flu in schools, some schools had to close. The N.C. Oral Health Section (NC OHS) had to cancel dental sealant projects for a few months and reschedule projects once flu season was over.

Now is a good time to get your flu vaccine to protect yourself, your family, your co-workers and your students. It is also a good time for you to remind them to get a flu vaccine so they do not bring the flu to school. The Centers for Disease Control and Prevention (CDC) recommends that everyone six months of age and older gets vaccinated against the flu. Only one vaccination is necessary for most people, since the flu vaccine makers have included protection from the 2009 H1N1 virus in this year's seasonal flu vaccine.



Getting the flu vaccine is the primary way to prevent the spread of the flu.

The flu is a common and highly contagious infection that can cause serious illness and even death in people of all ages. Last year in North Carolina, 36 people died from flu-related illness. Ten of them were children under 18. Getting the flu vaccine is the primary way to prevent the spread of the flu, but there are some additional reminders for students and staff that may help prevent the flu from spreading in the school setting:

- Wash your hands often with soap and water, especially after you cough or sneeze. Alcohol-based hand cleaners are also effective.

- Cover your nose and mouth with a tissue when you cough or sneeze. Throw the tissue in the trash after you use it.
- Avoid touching your eyes, nose or mouth. Germs spread this way.
- Stay home if you are sick. Students and staff should stay home for at least 24 hours after your fever is gone, except to get medical care or for other necessities. The fever should be gone without the use of fever-reducing medicine.
- Clean commonly used surfaces such as door handles, handrails, eating surfaces, desk, bus hand rails, etc., frequently with disinfectant.

Source:
N.C. Immunization Branch
www.immunize.nc.gov

Healthful Living SCOS and Grade Level Competencies: Grade K, Obj. 2.01; Grade 1, 2.01; Grade 2, 2.02; Grade 3, 2.03, Grade 4, 2.04; Grade 6, 2.02.

CURRICULUM CONNECTION

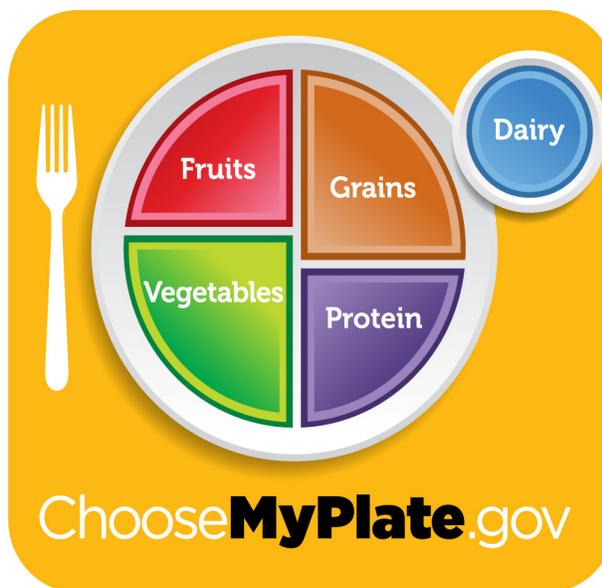
Choose My Plate for a Healthy Lifestyle

Eat a healthy diet for healthy teeth and gums. It just makes sense and sounds so simple. Now it has gotten even simpler with the recently revised U.S. Department of Agriculture (USDA) food guide called "MyPlate", formerly "My Pyramid."

Since 1916, the USDA has provided the public with recommendations on food. The new 2011 food guide icon, in the shape of a plate, is eye-catching and easy to understand. With a quick look at the plate, it is easy to see the concept of portion size. Half of what you eat with each meal should be fruits and vegetables (with a little more veggies than fruit). The rest of the meal should consist of grains and protein (with the amount of grains being more than protein). Dairy products round out the meal. Consider drinking fat free or low-fat (1%) milk. It is also important to select foods low in sodium and to drink water instead of sugary drinks.

So how does "My Plate" fit into healthy teeth and gums? Nutrients for healthy teeth and gums are the same nutrients that we need for healthy internal organs,

skin and bones. While we all understand the concept of needing to eat more fruits, vegetables, healthy grains, protein, and dairy, how many of us actually practice that daily? The new food guide gives us an easily recognized visual to see the amounts needed in each food group.



"My Plate" removes oils and sugars as they are not truly "food groups". Oils provide essential nutrients and come from many different plants and fish as identified on the [My Plate.gov website](http://MyPlate.gov).

Eating foods rich in calcium, Vitamin D and Vitamin C helps to build and keep healthy teeth and gums. Good food choices for

calcium and Vitamin D include fat free or low-fat milk (1%), soy milk, soy beans and other soy products, yogurt, canned fish, collards, turnip greens and fortified cereals, breads and rice or almond milk. Options for foods rich in Vitamin C include citrus fruits, red and green peppers, kiwi fruit, strawberries, cantaloupe, broccoli, cauliflower, pineapple and mango.

A diet high in sugar increases the risk for cavities. While our bodies do need carbohydrates (sugar falls under carbohydrates), most of us will get our daily limit by eating whole grains and fruits/veggies. Rarely do you need to add sugar to your diet, especially in the form of sweetened drinks and candy. Be sure to read page 5 of this issue for more information on ways to cut back on sweet treats for kids.

Healthful Living SCOS and Grade Level Competencies: Grades K, 4.01, 4.03; Grade 1, 4.01, 4.03, 4.04; Grade 2, 4.01, 4.02; Grade 3, 4.03; Grade 4, 4.04; Grade 5 4.01; Grade 8, 4.03.

FUN FACTS

Fun (and Educational) Food and Snack Facts

- Scientists theorize that human dentition was affected when our early ancestors learned to chop and cook food. By adapting to eat softer food, the human jaw may no longer be big enough to accommodate our molars. Our molars can often create crowded, crooked teeth which can promote decay and gum disease because of the difficulty in cleaning food and bacteria from the closely spaced teeth.
- Jaw muscles can contract with a force as great as 55 pounds of pressure on anterior incisors, and 200 pounds of pressure on back molars.
- Acidic foods such as lemons, citrus juices, or soft drinks don't cause cavities, but they can erode the enamel enough to expose the underlying dentin, and make teeth more prone to decay.
- What diet soda is lacking in sugar, it makes up for in acid, which can destroy your smile by softening tooth enamel just like sweetened sodas.
- People who drink three or more glasses of soda drinks daily have 62 percent more tooth decay, fillings and tooth loss than those who do not.
- An obscure Mexican plant called the "Lippa Dulcis" is 1000 times sweeter than table sugar. This plant does not cause tooth decay and could serve as the source of a low-calorie sweetener in the future.

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- Oddly enough, the cotton candy machine was invented by a dentist, William James Morrison (1860-1926). The machine, which melts sugar and presses it through a wire screen, was introduced at the 1904 World's Fair in St. Louis. Dr. Morrison called his invention "Fairy Floss".
- Modern day chewing gum was derived from chicle, the latex sap of the sapodilla tree and was introduced to Americans by the Mexicans around the time of the battle at the Alamo. Thomas Adams, an American inventor, used chicle as the base for commercially made chewing gums. This is probably how they later came up with the brand name "Chiclets."
- Some sugar-free chewing gums can prevent cavities. A chewing gum made from xylitol (a natural sweetener made from birch trees) helps prevent

cavities. In the presence of xylitol, bacteria can't stick to teeth. Chewing gum also increases the flow of saliva, which protects the teeth from decay.

- In an average lifetime, a person produces 10,000 gallons of saliva. Saliva helps to wash away food and neutralize acids in the mouth. As we age, our saliva diminishes, making us more vulnerable to dental infections as well as bad breath.
- Raisins and dried fruits can cause more tooth decay than chocolate because their natural sugars stick on the teeth longer and feed the bacteria in plaque that cause tooth decay.
- U.S and Japanese studies have found that black and green tea have antibacterial powers that help prevent cavities and gum disease.

- Certain cheeses including Aged Cheddar, Swiss and Monterey Jack, have been found to help protect teeth from decay by mixing with saliva to neutralize the effects of acids.
- Speaking of cheese, you probably didn't know that the soreness you feel when you burn the roof of your mouth with hot mozzarella cheese has a name – pizza palette.

From multiple sources, including:

<http://www.webmd.com/oral-health/healthy-teeth-10/cavities-myths>

<http://www.dentalhealthsite.com/10-amazing-facts-about-oral-health-you-did-not-know/>

<http://www.yourhealthmagazine.net/articles/dental-health/5145-fun-dental-facts.html>

DENTAL HEALTH RESOURCES

Books:

The Tooth Book **by Theo LeSeig**

Hear about teeth being "worthwhile" and "in style" in Dr. Seuss' book. Rhyming text and illustrations briefly point out what animals have teeth, their uses, and how to care for them (Ages 3 to 7).

Food for Healthy Teeth **by Helen Frost**

This book lists the types of food that are good to eat and show pictures of kids eating those foods (Ages 4 and up).

Web Links:

N.C. Nutrition Services Branch

The *N.C. Nutrition Services Branch* website has a wide range of resources for teachers that are ready to use. They have lesson plans, presentations, bulletin board designs, curriculums, toolkits and more.

Eat Smart Move More

The *Eat Smart Move More* website provides resources to support and encourage healthy eating and increased physical activity.

N.C. Immunization Branch

The *N.C. Immunization Branch* website provides materials about immunization schedules, vaccine requirements, fact sheets, posters, letters to parents, school staff materials and much more.

MyPlate.gov

MyPlate.gov presents nutrition recommendations from the U.S. Department of Agriculture (USDA). It is an update of the *MyPyramid* guide based on current nutrition research and with a new graphic concept.

Remember:

- **Brushing, flossing and regular dental visits can control biofilm (plaque) growth.**
- **Getting your flu shot protects everyone.**
- **Follow the *MyPlate* guide for nutritious meals.**

YOUR STATE PUBLIC HEALTH DENTAL HYGIENIST

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10 tips

Nutrition
Education Series

cut back on your kid's sweet treats

10 tips to decrease added sugars



Limit the amount of foods and beverages with added sugars your kids eat and drink. If you don't buy them, your kids won't get them very often. Sweet treats and sugary drinks have a lot of calories but few nutrients. Most added sugars come from sodas, sports drinks, energy drinks, juice drinks, cakes, cookies, ice cream, candy, and other desserts.

1 serve small portions

It's not necessary to get rid of all sweets and desserts. Show kids that a small amount of treats can go a long way. Use smaller bowls and plates for these foods. Have them share a candy bar or split a large cupcake.

2 sip smarter

Soda and other sweet drinks contain a lot of sugar and are high in calories. Offer water, 100% juice, or fat-free milk when kids are thirsty.



3 use the check-out lane that does not display candy

Most grocery stores will have a candy-free check-out lane to help moms out. Waiting in a store line makes it easy for children to ask for the candy that is right in front of their faces to tempt them.

4 choose not to offer sweets as rewards

By offering food as a reward for good behavior, children learn to think that some foods are better than other foods. Reward your child with kind words and comforting hugs, or give them non-food items, like stickers, to make them feel special.

5 make fruit the everyday dessert

Serve baked apples, pears, or enjoy a fruit salad. Or, serve yummy frozen juice bars (100% juice) instead of high-calorie desserts.



6 make food fun

Sugary foods that are marketed to kids are advertised as "fun foods." Make nutritious foods fun by preparing them with your child's help and being creative together. Create a smiley face with sliced bananas and raisins. Cut fruit into fun and easy shapes with cookie cutters.

7 encourage kids to invent new snacks

Make your own snack mixes from dry whole-grain cereal, dried fruit, and unsalted nuts or seeds. Provide the ingredients and allow kids to choose what they want in their "new" snack.



8 play detective in the cereal aisle

Show kids how to find the amount of total sugars in various cereals. Challenge them to compare cereals they like and select the one with the lowest amount of sugar.

9 make treats "treats," not everyday foods

Treats are great once in a while. Just don't make treat foods an everyday thing. Limit sweet treats to special occasions.

10 if kids don't eat their meal, they don't need sweet "extras"

Keep in mind that candy or cookies should not replace foods that are not eaten at meal time.



Center for Nutrition
Policy and Promotion

Go to www.ChooseMyPlate.gov for more information.

DG TipSheet No. 13

June 2011

USDA is an equal opportunity
provider and employer.

Who needs a flu vaccine?



Even healthy people can get the flu, and it can be serious.

Everyone 6 months and older should get a flu vaccine. **This means you.**

This season, protect yourself—and those around you—by getting a flu vaccine.



U.S. Department of Health and Human Services
Centers for Disease Control and Prevention

THE FLU ENDS WITH

For more information, visit: www.flu.gov