



The Maryland Children's
Oral Health Institute

10-26-09

A Clean Toothbrush May Help Protect You From The Flu®

“Project Clean Toothbrush: Important Tips to Help Prevent the Spread of Flu Germs”

The profession of dental medicine is uniquely positioned to help mitigate the impact of the H1N1 Swine Flu. Tiny droplets of saliva and mucus transport the virus through the air from the mouth. In an effort to help prevent the spread of these germs that contribute to the onset of illnesses, The Maryland Children's Oral Health Institute launched an offensive against the common cold, seasonal viruses and now the H1N1 Swine Flu. Collaboration between the nonprofit organization and the doctors of dental medicine at Valley Dental Pediatrics produced an infection control initiative, *Project Clean Toothbrush: Important Tips to Help Prevent the Spread of Flu Germs*. The Maryland Dental Society and the Maryland State Dental Association will work closely together to help advance the project throughout the state. The initiative is designed as a printable poster, complete with illustrations that offer ways to clean, decontaminate, disinfect and sanitize your toothbrush.

During the 2009-2010 flu season, it is essential to empower patients and their families with practical, preventive oral health measures in the wake of the H1N1 virus threat. Researchers have established that thousands of microbes can grow on toothbrush bristles and handles. Most are harmless members of the mouth's normal microbial flora; others can cause cold and flu viruses. The harmful bacteria can re-infect your mouth every time you brush. Infectious agents like the influenza viruses can thrive for significant periods of time on a toothbrush. Eliminating these germs and safely sanitizing your toothbrush between brushings may help to protect you from the flu.

While dentists recommend you replace your toothbrush every 3 to 4 months, it is important to thoroughly keep it clean no matter how often you get a new one. According to a survey by Colgate-Palmolive, only 8.6 percent of consumers comply. In fact, the survey shows that most Americans replace their toothbrushes every 9 months, while Japanese consumers replace their brushes every 3.1 months.

Dental professionals also recommend that you replace your toothbrush when you become ill with a cold or flu and again when you have recovered. But how many people actually go home and immediately throw away their toothbrush when they or family members get sick, especially if it was recently purchased at the average price of close to \$3.00 per brush? You can bet assuredly that in a significant number of homes the toothbrushes do not get tossed. Replacing toothbrushes for every child and adult in a household can be cost prohibitive in any economy. What takes priority is the investment in cold and flu medications and not the purchase of new toothbrushes.

Understanding the toothbrush etiquette of many families and the potential magnitude for the spread of the H1N1 swine flu virus led The Maryland Children's Oral Health Institute to team up with Valley Dental Pediatrics. This joint effort produced, *Project Clean Toothbrush: Important Tips to Help Prevent the Spread of Flu Germs*. These very tips could make the difference between you and your family staying healthy or you and your family catching the flu and possibly ending up hospitalized or worse. Dr. Cynthia Hodge, President of the National Dental Association Foundation, says, “This is a socially conscious, socially sensitive initiative that is about more than maintaining a clean toothbrush. It is about ways to resourcefully educate the public and the potential to protect people who may be more at risk of becoming infected with H1N1.”

Prevention that Empowers!

These tips may help protect some families where before they were at risk to become ill as a result of repeatedly using virus-contaminated toothbrushes. Dr. Marsha Butler, Vice President Global Oral Care at Colgate Palmolive, says “the *Project Clean Toothbrush* initiative helps to eliminate bacteria that may accumulate on your toothbrush or cause harm to your gums.” The recommended tips range from simply washing your hands before and after brushing to getting rid of your toothbrush when it is contaminated.

- ✓ Your hands are the main vehicles of transmission for the influenza virus. It is for this reason that the main recommendation to prevent H1N1 is to wash your hands frequently. Use soap and water, liquid hand sanitizer or pre-moistened hand wipes to remove the germs that congregate on your hands. Washing your hands for a minimum of 20 seconds before touching your toothbrush will cut down on the bacteria being introduced to the handle and bristles from your palms and fingers. The bacteria that cause E. coli, salmonella and gastrointestinal problems are found on the hands. You can remove many of these bacteria by washing your hands and scrubbing your fingernails. After all, you wash your hands before you put food utensils in your mouth to eat. Thus, it makes perfect sense to wash your hands before you put your toothbrush into your mouth.
- ✓ Washing your hands after you brush is important as well. This hygiene practice will help reduce the spread of microorganisms as a result of the contact your hands make with your face, lips and mouth. Washing your hands after you brush will reduce what you “hand over” to others. Dr. William Martin, President of the American Dental Association’s local component, the Maryland State Dental Association, said, “You can’t over emphasize the importance of washing your hands whether it is flu season or allergy season. People are vulnerable to the germs that end up on their hands and under their fingernail beds.” Good hand hygiene can make the difference between staying healthy and getting sick.
- ✓ Wash your toothbrush before and after every use. Hold the brush under running warm water. The warm water will soften the bristles and help to release food particles and excess toothpaste. Rub your thumb over the bristles with force while now allowing cold water to wash away any remaining debris and toothpaste. The cold water will cause the toothbrush bristles to regain firmness and may limit the reproduction of flu-causing germs.
- ✓ Disinfect your toothbrush by allowing it to soak in an antibacterial mouthwash. Stir it with the bristled end of your toothbrush for 30 seconds. Mouthwash containing alcohol will kill off most of the bacteria. You can also mix 2 teaspoons of baking soda in 1 cup of water and soak your toothbrush in the solution if you don’t have mouthwash.
- ✓ Another option is to store your toothbrush in a 3% Hydrogen Peroxide (H₂O₂) topical solution that is changed daily. Using enough of the solution to cover the bristles can keep your toothbrush disinfected. A quick way is to mix 1 teaspoon of peroxide in 1 cup of water and swish your toothbrush in it prior to use.
- ✓ Soaking your toothbrush in vinegar once a week overnight can also help kill germs. White vinegar is preferable; brown vinegar might stain the bristles.

- ✓ Using a tablet of denture cleanser like Polident® is another quick way to sanitize your toothbrush. This antibacterial cleaning system has detergents and enzymes that aid in the breakdown of food proteins. The effervescent or foaming action (Sodium Bicarbonate and Citric Acid) provides a mechanical cleaning action to loosen particles trapped between the bristles. Be sure to thoroughly rinse the denture cleaner from your toothbrush bristles and handle.
- ✓ Deep clean your toothbrush by securing it in the top rack or in the silverware rack of the dishwasher. Avoid putting the toothbrushes in the lower rack as the handles could melt. The same applies to tongue scrapers. It is also a good idea to routinely decontaminate your dental water jet reservoir and the tips (i.e., Waterpik) in the dishwasher. Just don't use the dishwasher setting for the pots and pans wash cycle as it may prove to be too hot.
- ✓ Avoid side-by-side storage of toothbrushes. Toothbrushes should be kept inches apart. Every family member should have a clearly identifiable, color-coded brush to avoid cross contamination. Store your toothbrush upright to expose bristles to the air. The Colgate® GRIP EMS® and the Crayola G.U.M. toothbrushes stand upright independently. The design of the bases allows these toothbrushes to be positioned away from other brushes helping to reduce the chances of intimate contact.
- ✓ Keep your toothbrush as far away from your toilet as possible to cut down on airborne bacteria from waste. Every time you flush you propel the germs from your toilet into the air where they can land on your toothbrush. These fine droplets of toilet water can hover in the air for as long as two hours, eventually settling on all surfaces throughout the bathroom. Always flush the toilet with the top lid closed.
- ✓ Replace your toothbrush at the first sign of bent bristles. Worn toothbrushes have bristles with broken, frayed and sometimes sharp edges. These brushes are less effective in removing plaque and can damage the gums, even causing bleeding. Dentists recommend replacing your toothbrush every season, every quarter or every three to four months - however you wish to remember.
- ✓ Air-dry your toothbrush by shaking the excess water from the bristles. Running your thumb or finger across the bristles will also help to remove the water.
- ✓ Clean toothbrush covers with soap and water. Covers should be placed over the bristles of a dry toothbrush when possible. Plastic covers that fit over bristles keep them free of airborne or hand-held contamination.
- ✓ Frequently clean the toothbrush holder with soap and water. Wall mounted toothbrush holders, as well as cups, cans and stands should be wiped down using disposable wipes to remove germs. Establish a routine of wiping down the countertop in front of and around the sink where you just brushed; this tidy routine will remove toothpaste-filled saliva droplets. By no means should icky globs of toothpaste remain in the sink after brushing.
- ✓ Purchasing toothpaste in a pump dispenser can help to eliminate the inclusion of every household member's germs becoming one more ingredient in the family tube. Almost everyone makes direct contact with their toothbrush when they squirt toothpaste onto it. Hold your brush away from the tip of the pump. This can help to reduce the chances that contact will be made between the toothpaste and the toothbrush. Aquafresh toothpaste by GlaxoSmithKline comes in a pump dispenser.

- ✓ You might also consider dispensing the dentifrice onto the back of your hand as another way to eliminate contact between the toothbrush bristles and toothpaste being squeezed from the tube. Remember the first recommendation prior to brushing your teeth is to wash your hands. Squeeze a pea size amount of the toothpaste on the back of your clean hand. It's okay if the tube or pump makes slight contact with your freshly sanitized skin. Sweep the toothpaste off your hand with the bristles and then brush. The little bit of toothpaste remaining on the back of your hand will help you to remember to wash them again when you have finished brushing. Don't forget that it is a good idea to not only thoroughly wash your hands and your toothbrush; it is wise to wash or wipe off the tip of the tube or pump and the cap of whatever toothpaste dispenser you use.
- ✓ Throw your toothbrush away or the toothbrush of anyone in your home who gets a contagious sickness such as a cold, flu or strep throat. Any toothbrushes that come into contact with the contaminated toothbrush should also be thrown away. Brushes should also be changed at the onset of an illness and again after you feel completely better. Erin R. Drew, MD, FAAP, a Board Certified Pediatrician says she routinely advised the parents of her patients to "replace their toothbrushes after you are no longer contagious, but before finishing the antibiotics." She explained that "bacteria can live in the toothbrush and re-infect you when the antibiotics are done." Dr. Drew was a practicing physician prior to joining a pharmaceutical company as a medical scientist.

Existing scientific research clearly shows that infectious agents like the influenza viruses can thrive for significant periods on a toothbrush. It is vitally important for the dental profession to play a role in helping to enlighten the public about ways they can avoid cold and flu viruses. At a July meeting with members of the Maryland Dental Society, the Maryland Department of Health and Mental Hygiene Secretary, John M. Colmers, spoke about the need for dentists to inform patients that the best ways to avoid the swine flu are prevention and vaccination. The dental surgeons agreed that taking a proactive role in the effort to help contain the number of Maryland citizens who may be at risk of contracting a cold or flu might prove to be epic especially for children and teenagers.

The Director of Advocacy & Outreach for The Maryland Children's Oral Health Institute, Dr. Leslie E. Grant, praised the clean toothbrush initiative. Dr. Grant went on to say that the visual reference would assist families in recognizing some of the practical ways they can help escape being plagued by seasonal viruses.

The Maryland Dental Society, the Maryland State Dental Association and Doral Dental will join forces to mass-produce *Project Clean Toothbrush* flyers and posters to elevate prevention awareness in schools and homes throughout the state. Ms. Tequila Terry, Executive Director of Doral Dental Services of Maryland, feels that the cling-on flyer will serve as a constant reminder and will especially benefit Maryland Healthy Smiles Dental Program members throughout the flu season. The Maryland Children's Oral Health Institute, Doral and both dental organizations will have the flyer and poster available to download from their websites.

Dr. Winifred J. Booker, CEO and Director of Development for The Maryland Children's Oral Health Institute, said, "The timing is ideal to introduce *Project Clean Toothbrush* because October is National Dental Hygiene Month. The end of October culminates with the celebration of Halloween by many excited, costumed youngsters. This event has children out-and-about, often in the cool weather for hours, some coughing and sneezing while collecting sweet treats. The costume-induced changes in body temperature, the unpredictable weather, the blissful mingling and the exchanging of candy creates a vulnerable environment that may increase the risk of catching severe colds and potentially deadly flu viruses. These fall events and the recent loss of three young lives in Maryland further corroborate the significance and paramount importance of introducing an oral health initiative like *Project Clean Toothbrush: Important Tips to Help Prevent the Spread of Flu Germs.*"

The Centers for Disease Control and Prevention (CDC) reports that influenza or the flu is a serious disease that people of any age can contract. Prevention has always been the hallmark of the dental profession and *Project Clean Toothbrush* is no exception to the tradition. “Having the flyer and poster available in Spanish expands the effort to educate the public about flu prevention measures and helps to limit the spread of these potentially deadly viruses,” says Dr. Francisco Ramos Gomez, President of the Hispanic Dental Association. Dentists in Maryland and around the country will come together yet again to do their part to protect the health of the patients they care for and the citizens they care so much about.

For information on how to secure the cling-on flyers that will adhere to a bathroom mirror or refrigerator door or to download 8.5 x 11 or poster size copies of *Project Clean Toothbrush*, visit The Maryland Children’s Oral Health Institute at www.mycuhi.org. You can also download this article, the flyers and posters from the Maryland Dental Society at www.themds.org and the Maryland State Dental Association at www.msda.com.

The Maryland Center for Immunization, H1N1Info@dhmh.state.md.us, offers swine flu information to help protect you and your child. Visit www.flu.maryland.gov to learn more about flu protection and prevention. For additional information on preparedness in Maryland visit: <http://www.ready.gov/> and www.dhmh.maryland.gov/emergencypreparedness. The Centers for Disease Control and Prevention provides swine flu information and guidelines on their website at www.cdc.gov/h1n1flu or go to www.flu.gov.

Dr. Winifred J. Booker, the author of the article and The Maryland Children’s Oral Health Institute would like to thank the doctors of dental medicine at Valley Dental Pediatrics for helping to refine the “Project Clean Toothbrush” flyer. Ms. Aqsa Chaudhry a senior at Franklin Senior High School located in Reisterstown, Maryland, is to be commended for arranging the flyer as well as Mr. Richard Harden, the Language Instructor at Franklin Senior High School for translating the flyer into Spanish and Ms. Lee Wellman, CEO of Any Dental Detail for editing the article “A Clean Toothbrush May Help Protect You From The Flu©.” We appreciate the support of everyone in organized dentistry especially the Maryland Dental Society and the Maryland State Dental Association and all of the media who have volunteered to help us disseminate this important personal health care message to children and families everywhere.