



Actor Draws Attention Oral Cancer

The Massachusetts Dental Society (MDS) is pleased to make this semiannual publication available to our member dentists as a way of communicating important oral health information to their patients.

Information in **WORD OF MOUTH** articles comes from dental health care professionals of the MDS and other leading professional dental organizations, including the American Dental Association. If you have any questions about specific content that may affect your oral health, please contact your dentist. For timely news regarding oral health, visit the “For the Public” section of the MDS website at www.massdental.org.

Your comments and suggestions regarding **WORD OF MOUTH** are always welcome. All correspondence and requests for additional copies may be forwarded to Melissa Carman, Managing Editor, c/o the Massachusetts Dental Society, Two Willow Street, Suite 200, Southborough, MA 01745-1027, or email mcarman@massdental.org.

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Jeanne M. Burdette, *Manager, Graphic Design*
Shelley Padgett, *Graphic Designer*
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Jessica Robinson, *Communications Assistant*
Bill Donnelly, *Contributing Writer*

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When Academy Award–winning actor Michael Douglas showed up on the set of the *Late Show with David Letterman* last August, most viewers probably thought he was going to chat about his new movie. But Douglas shocked Letterman and the late night audience with his revelation that just three weeks before, he had been diagnosed with stage IV oropharyngeal (throat) cancer, a form of oral cancer.

According to Douglas, who said he had already begun radiation and chemotherapy treatments to battle the oral cancer, it started as a sore throat. “It had been bothering me for a while,” he told Letterman. “In the

early summer, I had a really sore throat, and I actually went through a litany of doctors and tests, and they didn’t find anything.” Then, in early August, an exam revealed a small tumor, reportedly near the base of the tongue, according to *U.S. News & World Report*. Douglas told Letterman that while he was being treated for stage IV cancer—one of the most severe kinds—doctors gave him an 80 percent chance of recovery. Douglas is said to have been a longtime smoker and drinker, both of which are high-risk factors for oral cancer.

More than 36,000 Americans will be diagnosed with oral or pharyngeal cancer this year, according to the Oral Cancer Foundation.

The Massachusetts Dental Society (MDS) wants to spread the word that early detection is the key to beating oral cancer. According to the Oral Cancer Foundation, more than 36,000 Americans will be diagnosed with oral or pharyngeal cancer this year. In 2010 alone, these cancers will cause more than 8,000 deaths. This translates into approximately one person per hour dying of oral cancer, 24 hours per day.

Of all newly diagnosed individuals, only slightly more than half will still be alive in five years. The mortality rate for oral cancer is particularly high not because it is difficult to diagnose, but because it is often detected in its later stages when it may have spread to other locations, such as the lymph nodes in the neck area. That is why early detection is so important. Your dentist or dental hygienist should perform an oral cancer screening at each cleaning appointment, which can include an examination of the soft tissue in your mouth, the gums, lip, tongue, and floor and roof of your mouth. Be sure to let him or her know if you are a tobacco user.



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Risk Factors

But what causes oral cancer? Risk factors for oral cancer are cumulative over time and include smoking cigars and cigarettes, excessive alcohol consumption, and the use of smokeless tobacco. Also known as chewing tobacco, spit, dip, and chew, smokeless tobacco is *not* a safe alternative to smoking. In fact, just like smoking cigarettes, smokeless tobacco is very addictive, contains nicotine and other chemicals, and is a serious health risk. Another cause of oral cancer is thought to be HPV-16, otherwise known as the human papillomavirus, which is also responsible for the majority of cases of cervical cancer in women.

The MDS encourages people who smoke or chew tobacco to try to quit, noting that when found early on, oral cancer has an approximate survival rate of 80 to 90 percent. The first step in reducing the risk of developing oral and head-and-neck cancers is to avoid tobacco use altogether and to be aware of the warning signs, which include lingering pain in the mouth or jaw; numbness; swelling; and sores, lesions, lumps, or white or reddish patches in the mouth that do not heal.

Whether you are a famous figure or an “average Joe,” see your dentist or physician immediately if you experience any of these symptoms. Remember, early detection is a key factor in the fight against oral cancer. For more information, visit the Oral Cancer Foundation website at www.oralcancerfoundation.org.

To promote the importance of early detection of oral cancer, the MDS has produced a pocket mirror that you can use to check your mouth for growths, lesions, or any changes to your oral region. The first 100 WORD of MOUTH readers to sign up at massdental.org/mirror will receive one free oral cancer self-examination mirror. Limited to Massachusetts residents only.



One List You Don't Want to Be On

While the most recent and arguably one of the highest-profile celebrities to be diagnosed with oral cancer, Michael Douglas is not the only famous person associated with the disease. Former San Diego Padre outfielder and Baseball Hall of Famer Tony Gwynn announced last year that he was undergoing radiation and chemotherapy treatment for cancer of the parotid gland, a salivary gland that pumps saliva into the mouth. Gwynn believes his cancer was related to his use of chewing tobacco.

Other notable celebrities who have suffered from oral cancer include:

Film Director Anthony Minghella

Died in 2008 from complications from surgery performed to treat tonsil cancer.

Rock Guitarist Eddie Van Halen

Treated for cancer of the tongue in the early 2000s.

Musician George Harrison of the Beatles

Treated for a malignant lump in his throat in 1997.

Actress Lana Turner

Died in 1996 after a long battle with oral cancer.

Film Critic Roger Ebert

Diagnosed with a salivary gland tumor in 1993, he underwent surgery in 2006 to remove a section of his lower jaw, resulting in the loss of his ability to speak and eat. Ebert now eats through a G-tube.

Actor Jack Klugman

Diagnosed with cancer of the larynx in 1974, Klugman would continue to fight the cancer, ultimately undergoing surgery for it again in 1989. This resulted in the removal of his right vocal cord, leaving him initially unable to speak. Klugman has subsequently regained his ability to speak after years of therapy.

Olympic Athlete Jim Thorpe

Treated in 1951 for lip cancer.

Baseball Player Babe Ruth

Died in 1948 after battling nasopharyngeal carcinoma, cancer of the upper throat.

Psychoanalyst Dr. Sigmund Freud

Diagnosed with cancer of the soft palate in 1923, Dr. Freud would go on to have more than 33 surgeries for cancer of the jaw and oral cavity and eventually die from oral cancer in 1939.

U.S. President Grover Cleveland

Underwent surgery in 1893 to remove a cancerous growth on the roof of his mouth.



Hit the **Dentist's Chair** for a Good Night's Sleep

For some dental procedures, such as surgical removal of teeth, many people will opt to “sleep” through treatment by going under anesthesia. But when it comes to getting a healthy night's sleep outside of the dentist's chair, many dentists can also offer a helping hand, especially for those suffering from a serious sleep disorder that has widespread health ramifications: obstructive sleep apnea (OSA).

According to the American Academy of Dental Sleep Medicine, more than 18 million Americans have OSA. A sleep-related breathing disorder, OSA occurs when the soft tissue in the back of the throat repeatedly collapses and blocks the airway, keeping air from getting into the lungs. This causes the blood-oxygen level to drop, and when it drops low enough, the body wakes up. These reductions and pauses in breathing usually last between 10 and 30 seconds, but can sometimes last up to a minute, and can happen hundreds of times over the course of a night. And disrupted sleep can lead to a variety of health issues. At the minimum, the person can suffer from excessive drowsiness, headaches, irritability, difficulty concentrating, and may even fall asleep during the day, which poses its own danger.

But untreated OSA can also lead to more serious medical conditions, especially involving the cardiovascular system. OSA has been linked to an increased risk of stroke in middle-aged and older adults, and it nearly doubles the risk of stroke for men, according to a report from the National Heart, Lung, and Blood Institute of the National Institutes of Health. Additionally, the researchers report that untreated OSA is associated with an increased risk of high blood pressure, heart attack, irregular heartbeats, and heart failure.

Diagnosis and Treatment

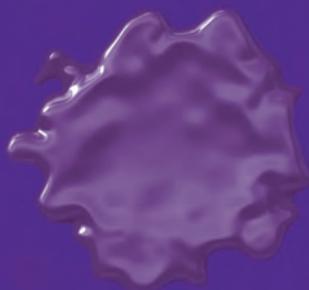
Proper diagnosis and treatment of OSA should involve a joint effort between a physician trained in sleep disorders and a dentist with specialized advanced training in this area. Treatment options for OSA include continuous positive airway pressure (CPAP), oral appliance therapy, and upper-airway surgery. CPAP is pressurized air generated by a bedside machine. Air moves through a tube that is connected to a mask that covers the nose, mouth, or both. The pressure of the air forces the airway open and keeps it clear. This type of treatment would be prescribed and overseen by a sleep specialist or physician.

Oral appliances, which are similar to orthodontic retainers or sports mouthguards, are worn in the mouth during sleep. The devices help prevent the collapse of the tongue and soft tissues in the back of the throat, keeping the airway open during sleep and promoting adequate air intake. Oral appliances work in several ways, including: repositioning the lower jaw, tongue, soft palate, and uvula; stabilizing the lower jaw and tongue; and increasing the muscle tone of the tongue. There are two main categories of oral appliances available. Tongue retaining appliances hold the tongue in a forward position, which keeps the back of the tongue from collapsing during sleep and obstructing the airway. Mandibular repositioning appliances are designed to reposition and maintain the lower jaw in a protruded position, which opens the airway by indirectly pulling the tongue forward, stimulating activity of the muscles of the tongue. It also helps keep the lower jaw in a stable position to prevent opening of the mouth.

Dentists with training in oral appliance therapy are familiar with the various appliances and, in consultation with a patient's physician, can determine, design, construct, and fit an appliance to meet a patient's individual situation and condition. Oral appliance therapy can take several weeks to several months to complete, and will include monitoring by the dentist to evaluate the response of the teeth and jaws to the treatment.

Surgical procedures for OSA are performed by dentists trained in oral and maxillofacial surgery. In general, this treatment option is pursued when nonsurgical therapies are non-applicable, unsuccessful, or intolerable (e.g., the patient has a high level of discomfort with the CPAP machine). Depending on the extent of the OSA, these dentists will use minimally invasive procedures or more complex surgery, such as jaw advancement. With surgical treatment of OSA, it may be necessary to remove tonsils and adenoids (especially in children), the uvula, or parts of the soft palate and throat.

When it comes to OSA, dentists can play an important part in its diagnosis and treatment. So if you think you may have OSA, mention it to your dentist because the sooner you seek treatment, the sooner you can go back to having a restful night's sleep. And who doesn't want that?



Saliva:

Nothing to Spit At

When you think about your mouth, the first thing that probably comes to mind is “teeth.” After all, those pearly whites are the most prominent feature in your mouth. Next, you probably think of the gums and the tongue. But there’s another component of the mouth that is often overlooked yet plays a significant role in your oral health: saliva.

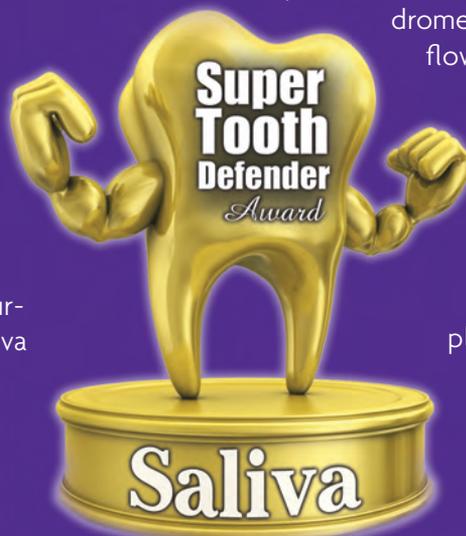
Saliva is produced and secreted by the three major salivary glands in the mouth, as well as within tissue covering the inner lip and soft palate. It moistens food, aiding in chewing, swallowing, and digestion, and also moistens the tissues of the mouth. It protects your mouth from decay and disease in a few different ways: it washes food particles from your teeth and gums; it helps stop acids that eat away at teeth; it reduces or destroys disease-causing organisms; it replenishes minerals in your tooth enamel; and it helps heal wounds.

While it is 98 percent water, saliva also contains electrolytes, mucus, and enzymes. These enzymes help break down starchy foods, but also help maintain the surface of tooth enamel and prevent cavities. According to the American Dental Association (ADA), saliva provides high levels of calcium and phosphate ions at the tooth surface, enhancing protection of the enamel. Saliva is the mouth’s primary defense against tooth decay and, when teamed with fluoride, provides a one-two punch in oral health care. Fluoride works to prevent tooth decay by boosting the ability of saliva to return lost minerals to tooth enamel before cavities can develop, a process called remineralization.

Another way to look at saliva is to think of it as the bloodstream of the mouth—it provides nutrients, removes waste, protects against foreign bacteria, and constantly remineralizes tooth enamel. And much like blood, saliva can provide diagnostic insight into systemic health. Saliva is used in the early diagnosis of viral infections, such as HIV, and researchers report promising results in the use of saliva for the diagnosis of breast cancer, oral cancers, and viral hepatitis, according to the ADA.

Dangers of Dry Mouth

While it may seem to be a nuisance at times (like when you inadvertently spit while trying to pronounce a challenging word or drool on your pillow while you sleep), too much saliva is better than not enough. A reduction in saliva flow results in a dry mouth, a condition known as xerostomia. This is a common problem among older adults and is often a side effect of prescription and over-the-counter medications, including antihistamines, decongestants, pain killers, high blood pressure medication, diuretics, and antidepressants. In addition, radiation and chemotherapy treatments have been shown to result in dry mouth, and some systemic conditions, such as Sjögren’s syndrome, also compromise salivary flow.



If left untreated, dry mouth can jeopardize oral health. Not having enough saliva to lubricate the mouth, wash away food, and neutralize the acids produced by plaque can lead to extensive decay. Dry mouth can also lead to irritated soft tissues in the mouth, making them inflamed and more susceptible to infection. If you suffer from dry mouth, contact your dentist, who can recommend

various methods to restore moisture. In addition to chewing sugar-free gum, you can use commercial products such as artificial saliva and tissue lubricants to relieve dry mouth symptoms. If the symptoms persist, you should see your physician to rule out a possible underlying medical condition.

Given all these benefits, saliva might just be the unsung hero of the mouth.

WORD of MOUTH TURNS 10

How's this for perspective? In the winter of 2001, WORD OF MOUTH went to press with its first issue just as the new president, George W. Bush, was coming to Washington; Osama bin Laden was an obscure name to most people, related to some bombings in the Middle East; and Barack Obama was a little-known Illinois state senator from Chicago. In the sports world, the New England Patriots had yet to win even one of their three Super Bowl trophies, and a Red Sox World Series victory seemed like a hopeless dream. In the world of dentistry, concerns presented in our first issue, Winter-Spring 2001, included the increasing prevalence of oral cancer related to tobacco use, the potential problems related to the youthful trend of oral piercings, and the growing trend of adult orthodontics. As the decade progressed, these topics and many more have been covered in WORD OF MOUTH, revealing a multitude of advances, trends, and opportunities to promote oral health as it relates to overall health.



Celebrating
10
Years

Oral Cancer

As noted in our very first issue, oral cancer is a serious and often fatal disease affecting more than 30,000 Americans every year. That number has increased to 36,000 since 2001, but the real change in recent years has been in the demographics of the disease. In our Summer-Fall 2010 issue, we reported on the growing number of women and young people afflicted with oral cancers, based on studies by the Oral Cancer Foundation (OCF). In the past, the majority of oral cancers occurred in middle-aged men with a history of tobacco use and excessive alcohol consumption. For every six men diagnosed, only one female was diagnosed with oral cancer. However, recent findings indicate that the numbers are shifting tremendously, and disturbingly. Now, one out of every two cases of oral cancer reported is a female. Additionally, another troubling finding in oral cancer trends indicates that younger males and females are now at a greater risk due to exposure to the human papillomavirus 16. HPV-16 is a strain of the sexually transmitted virus that had been previously connected with an increased risk of cervical cancer.

One thing that hasn't changed about oral cancer is the importance of early detection. A lack of routine oral cancer screenings can leave the disease undiagnosed until it's too late. That's why it's crucial to note any changes in your mouth, such as strange bumps, white patches, or odd growths on the tongue, cheeks, or gums. And make sure you have regular dental exams, when your dentist should perform an oral cancer screening as part of a routine checkup. Oral cancer is such an important topic that this issue of WORD OF MOUTH is also featuring another article on awareness (see pages 2-3).

Back to the Beginning

2001 | 2002 | 2003 | 2004 | 2005

It all started in 1999 with a passing comment made at a Massachusetts Dental Society (MDS) Public Relations Committee meeting. At the end of a lengthy discussion about plans for an upcoming public awareness campaign, someone suggested that, in addition to producing ongoing radio and television commercials, perhaps there was another way to educate the general public about important and timely oral health issues that went beyond 30 or 60 seconds of airtime.

It was *that* "word of mouth" that, a little more than a year later, inspired the creation of *this* WORD OF MOUTH.

For the past 10 years, WORD OF MOUTH has provided hundreds of thousands of readers across Massachusetts with valuable information on a wide range of subjects relating to their oral health and well-being. The publication is produced twice each year (winter and summer) and is distributed through the dental practices of nearly 4,000 active MDS members. In addition, it is mailed to more than 300 public libraries across the state. WORD OF MOUTH is also available on the MDS website, www.massdental.org.

Adult Orthodontics

Braces are no longer just for kids. Getting braces used to mean grey metal brackets and wires, and there weren't too many adults who would pursue orthodontic treatment for malaligned teeth due to the embarrassment associated with wearing so much metal. However, as orthodontic technology advanced, the bulky wires gave way to clear, lighter, less noticeable braces. In the last decade, we've seen orthodontics evolve to include ceramic braces and invisible aligners. Ceramic braces are bonded to the front surface of the teeth in the same way as metal braces, but because they are natural-colored, they are much less noticeable. Also, clear aligners, which are nearly undetectable, fit tightly over the teeth, gradually and gently shifting teeth.

Oral Health Is Overall Health

Perhaps the greatest advancement in oral health in the last 10 years is the growing awareness of the link between oral health and overall health. More evidence has surfaced in recent years that poor oral health in the form of periodontal (gum) disease can be a precursor or indicator of cardiovascular disease, stroke, diabetes, preterm and low-weight births, and more recently, rheumatoid arthritis and memory loss. Most studies focus on gum disease and plaque—a sticky film of bacteria that forms on the teeth—and their connection to disease in other locations of the body. Plaque creates toxins that damage the gums and can cause periodontal disease that, when left untreated, can travel through the bloodstream, affecting the body's organs. In 2007, bacteria from an abscessed tooth spread to a 12-year-old Maryland boy's brain, resulting in a severe brain infection that led to his death. Taking a systemic view, it is clear that oral health directly affects overall health.

Dental Implants

In the last 10 years, dental implants have become an increasingly safe, effective, and popular treatment approach for missing teeth. An implant is an artificial tooth root placed into the jaw to hold a replacement tooth (crown), bridge, or denture in place. It typically takes two to six months for the bone and implant to bond together to form anchors. During this time, a removable temporary tooth replacement can be worn over the implant site. The procedure has now advanced to the point where, in some cases, an implant can be placed immediately following tooth extraction.

Tooth Whitening

Once considered something of an extravagance for the rich and famous, tooth whitening is now a common, reasonably priced procedure. Methods have constantly been evolving to offer newer, shinier ways of achieving a brighter, whiter smile—most based in the application of hydrogen peroxide

solutions to the tooth surface to remove or reduce staining. In 2001, chair-side procedures were the most effective, and today they still are, but new techniques have decreased the necessary appointment times and number of visits to achieve the optimum effect. Additionally, at-home methods have increased in popularity and effectiveness. While 10 years ago, take-home methods usually required a fitted mouthpiece fabricated by a dentist, today most stores carry whitening products from simple mouthrinses to treated strips that can be applied directly to the teeth. Although store-bought methods are more widespread, they are generally weaker formulations and not as effective as take-home systems offered by dentists.



“Green” Dentistry

There's no denying that in the 21st century, we are becoming more aware of the importance of “green” practices that help preserve the environment, save our resources, and ultimately improve our own health. And this holds true for dentistry. A major technological advancement in the dental office came with the adoption of digital X-rays. With digital X-ray machines, dental personnel can produce an image using a small fraction of the previous radiation dosage, decreasing radiation exposure for the patient. Digital X-ray machines don't use film, which means no more time-consuming, and waste-producing, developing processes and chemicals.

Sedation Dentistry

Dental anesthetic techniques have come a long way from thick needles full of Novocaine. Today, local anesthetics are much more targeted and less heavy-handed—the “pinch” of pain promised in the past is just that, a minor sting. However, for those who still dread the needle or just the very thought of a dental visit, dentists now offer various sedation methods that take the pain, fear, and anxiety out of the experience. For those who do not wish to undergo deep sedation, which suppresses normal reflexes and knocks a patient out for the duration of a procedure, dentists can employ a variety of minimal sedations, some taken orally, like benzodiazepine—an anti-anxiety drug—and some given as an inhaled gas, as in nitrous oxide. All promise to make the dental experience less stressful for anxious patients.

From the turn of the millennium and into the second decade of the 2000s, our lives, our world, and dentistry have all confronted long-standing problems and encountered new challenges as we press forward into the future. And WORD OF MOUTH has been there, chronicling oral health issues in this sweeping decade, while remaining both on the cusp and on the cutting edge.

| 2006 | 2007 | 2008 | 2009 | 2010

It's believed that no other state dental association has a publication devoted to this purpose that has existed for such a long, continuous period of time. Besides being a valuable resource for MDS members and the public, WORD OF MOUTH has been recognized outside of Massachusetts with awards from several regional and national organizations for its many contributions to public education.

A lot has changed in the dental profession over the last decade. And WORD OF MOUTH has strived to keep readers up to date with all those developments. Even the design of the publication is different from what it was 10 years ago. (As a way of thanking our readers for coming along on this journey with us, we are including a free pull-out desk calendar in this issue. Simply fold the calendar according to the instructions on the flap, and place on your desk.)

But one thing that has not changed is the MDS's commitment to improving the oral health of all residents in the Commonwealth. As we have discovered over the past 10 years, to help achieve this, it is often the written word that is ultimately the most effective “word of mouth.”

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Fluoride

Is “Elemental” to Good Dental Health



There’s an old saying, “An ounce of prevention is worth a pound of cure,” and when it comes to your oral health, never has a truer statement been said. You know that adopting good oral health habits, like brushing your teeth at least twice a day, flossing regularly, and visiting the dentist every six months for cleanings and checkups, can help keep your smile in tip-top shape. But there’s one other “element” that helps tremendously in preventing cavities and keeping your mouth as healthy as can be: **fluoride**.

Just what is fluoride? Fluoride is a compound of fluorine, an element in the earth's crust. Fluoride compounds are components of minerals in rocks and soil, and as water passes over rock formations, it dissolves the fluoride compounds, releasing fluoride ions. What this means is that small amounts of fluoride are present in all water sources. (Fluoride is also naturally present in all foods and beverages, but the concentration varies.)

According to the American Dental Association (ADA), extensive research shows that optimal levels of fluoride not only reduce cavities in children and adults, but also help repair the early stages of tooth decay. How is fluoride so effective in preventing cavities from forming? When exposed to the teeth, fluoride is easily absorbed into tooth enamel, which it strengthens in a process called "remineralization," building a barrier so that new cavities can't form.

Are You Fluoridated?

To ensure your oral health, you'll want to be sure you're getting the optimal amount of fluoride, which is available in two forms: topical and systemic. Topical fluorides, such as toothpaste, mouthrinse, and professionally applied treatments, are applied to the surface of the teeth and strengthen tooth enamel, making teeth more resistant to decay. And as mentioned earlier, one of the most effective ways to fight tooth decay is to brush at least twice a day with a toothpaste containing fluoride. Systemic fluorides are swallowed and distributed through the bloodstream to the teeth, and these are generally delivered in the form of fluoride tablets, drops, and lozenges, as well as fluoridated water.

What's more, fluoridated water is one of the most efficient and effective ways to deliver fluoride. The Centers for Disease Control and Prevention believe that fluoridating community water is one of the 10 greatest public health achievements of the 20th century. And they are not alone: More than 65 leading health organizations, including the ADA, Massachusetts Dental Society, American Academy of Pediatric Dentistry, American Medical Association, World Health Organization, and American Cancer Society, support community water fluoridation on the basis of the scientific evidence that continues to support its safety and effectiveness.

The benefits of community water fluoridation are not to be overlooked. In fact, research shows that water fluoridation continues to be effective in reducing tooth decay by about 20 to 40 percent, according to the ADA. Approximately 72.4 percent of the U.S. population served by public water systems receives the benefit of optimally fluoridated water.

Fluoridation of community water supplies is simply the adjustment of the already existing, naturally occurring fluoride levels in drinking water to a level recommended by the U.S. Public Health Service for the prevention of tooth decay, which is 0.7 to 1.2 parts per million (ppm). Think of it this way: Fortifying water with fluoride is similar to fortifying milk with vitamin D, orange juice with vitamin C, and table salt with iodine.

If most of your drinking water comes out of a bottle, you may be missing out on the benefits of fluoride because the majority of bottled waters do not contain it. And since Americans consumed more

than 8.45 billion gallons of bottled water in 2009, according to the International Bottled Water Association, you may not be getting enough fluoride. So make sure to check the label for fluoride content. Note that the U.S. Food and Drug Administration does not require bottled water companies to indicate fluoride content on labels unless it's been added to the water. If fluoride has been added, it should contain 0.7 to 1.2 ppm of fluoride. (One ppm is equal to one mg/L.) And if you have a home water system, you'll also want to be aware that some of them, such as distillation units, may remove fluoride from your water, so you'll want to be sure to supplement your diet with a combination of fluoride toothpaste and fluoride tablets. Consult your dentist for the best approach.

Just Get It, Got It?

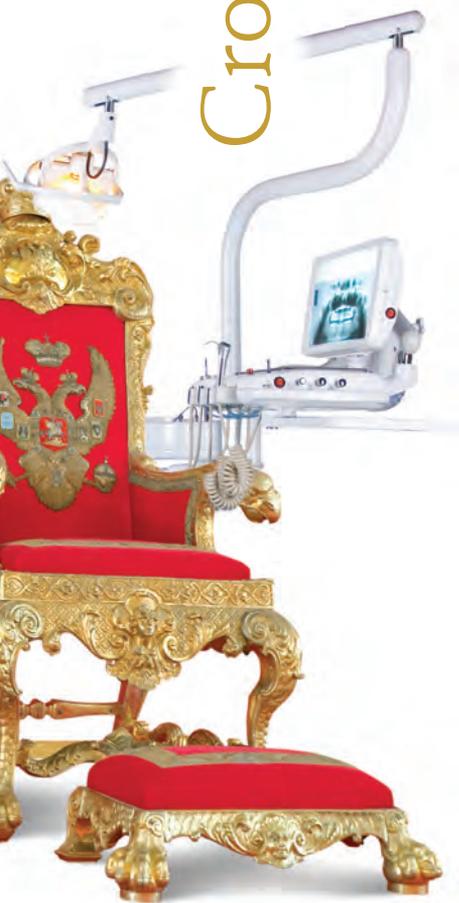
Ultimately, however you get it—toothpaste, fluoride treatments, tap water, bottled water, or any combination—the most important thing is that you just get it. Fluoride is one element you shouldn't do without.

MDS President Speaks Out for Fluoride

In response to a recent front page story on the issue of fluoride published in *The Boston Globe*, Massachusetts Dental Society President Dr. John Fisher wrote a *Letter to the Editor*, which appeared in the *Globe* on October 10, 2010. The following is an excerpt of that letter:

“ *Dentistry is all about prevention. As dentists, we are trained to do everything possible to keep every tooth healthy. . . . More than 65 major health organizations worldwide have endorsed water fluoridation. Clinical studies continue to show that fluoridated water reduces tooth decay by up to 60 percent in children and 35 percent in adults. . . . One of the biggest issues in Massachusetts is access to health care for the underserved. That includes oral health care. With less dental disease, there is less need for access. Prevention is less expensive than treatment—for the individual and for the Commonwealth.* ”

Crowning Glory



Ay good dentist will treat your teeth like royalty, and as such, there may come a time when your tooth requires a crown. As the name implies, a dental crown rests in a place of prominence, as a top, or a cap, that can be placed upon an existing tooth. While at times placed as a matter of aesthetics, dental crowns often serve more important roles in a patient's oral health. Often, due to injury, decay, or wear, a tooth has become so compromised that a crown may be the only way to maintain the tooth's shape and offer the stability needed to maintain not just a nice smile, but a proper bite and correct spacing along the dental arch. So, crowns play as important a role in dentistry as they do for any monarch.

And they are not a new idea; dental crowns may have as long a history as the kings and queens of antiquity. In fact, the American Dental Association reports that the first recorded use of dental crowns can be ascribed to the Etruscans—the people who preceded the Romans as inhabitants of northern Italy more than 2,500 years ago. Early crowns may have consisted of ivory, animal teeth, and even repurposed human teeth extracted from either live donors or the dead. The sanitary problems of these materials may have led to the development of gold crowns, which were more malleable and cleaner, and soft enough not to create excessive wear to the opposing teeth. In any event, gold crowns became the gold standard during later centuries as dentistry advanced. In the 19th century, porcelain crowns made their first appearance, and with them, a market for more natural-looking crowns that continues to this day.

Today, dental crowns can be fabricated quickly and accurately in special laboratories from several kinds of material, depending on the dental purpose and aesthetic issues present. Usually, the lab will work from a cast of the patient's teeth, attempting to replicate the unique contours and size of the existing tooth. Many crowns are made of metals—usually gold alloys and other alloys, such as palladium, or base metals, such as nickel. While these crowns are safe, stable, and easily shaped and placed over the damaged tooth, they lack the natural appearance of porcelain and resin crowns. For this reason, all-metal crowns may be best for back molars. Another very stable crown consists of a metal base with a porcelain face fused to it. These crowns offer a good deal of stability, and have a generally natural look. A minor drawback of these hybrid crowns is that the underlying metal may become apparent if the porcelain wears off or cracks. In addition, a dark ridge may be visible along the gum line.

Recently, resins have been introduced in crown making, with great success, as this material is flexible and inexpensive and can emulate the natural color of surrounding teeth. Generally, though, resin crowns have a shorter lifespan than crowns made of other materials, as they break and wear down more quickly. And, of course, there are all-porcelain crowns, which are most likely to have the appearance of a natural tooth. Porcelain crowns are more stable than resin crowns, but they can still chip and break.

Regardless of the type of crown chosen, it is important to follow a dentist's direction regarding the crown's upkeep and maintenance in order to ensure that it remains glued in place and is not compromised by bad habits.

Conditions that indicate the crowning of a tooth range from simple wear and tear over time, which is sometimes aggravated by grinding; to a tooth having been filled too many times, which leaves it weak and subject to further decay; to a traumatic break in a tooth, which leaves the tooth uneven and compromised. Such cases may require a root canal first, as these injuries often expose the pulp chamber, rendering it susceptible to infection. Also, quite often, if a root canal has been performed for other reasons, a crown may be placed over the old tooth for stability and aesthetics as the old, dead tooth will discolor and be fragile and weak after the procedure. Generally, the existing tooth will be prepared by the dentist for the crown and then placed with a specific dental cement.

As in history, the restoration of the crown offers a possibility of order and health. So, if you have any questions regarding your teeth, your smile, or your "crowning glory," please consult with your dentist.

TOOTH "PICKS"

No Role Model When It Comes to Oral Health

Oftentimes, children and young adults will try to emulate a celebrity or sports figure they admire by adopting the celebs' diet routines, workout regimens, or fashion style. But when it comes to oral health care, one celeb people may want to steer clear of is pop singer Jessica Simpson, who has proclaimed that she doesn't brush her teeth regularly and that she has a rather peculiar oral hygiene routine. In an interview with Internet radio station iheartradio.com last year, Simpson laughed as she said, "I don't brush my teeth. No, really! I just use Listerine—and sometimes I'll use my sweater." She then went on to say, "I do brush every now and again, but my teeth are extremely strong." But they may not be for long if she keeps eschewing the toothbrush, fluoride toothpaste, and dental floss for a cashmere sweater. And not only does this mean that she is walking around with harmful, disease-causing bacteria in her mouth, but she's walking around with plaque, saliva, and food particles on her clothes. Kids, definitely don't do this at home.



Raisin' Concern About Cavities

Are those raisins in your store-bought raisin bran cereal bad for your teeth? Researchers from the University of Illinois at Chicago College of Dentistry think so. A recent study measured the plaque bacteria levels on the teeth of subjects who consumed store-bought raisin bran cereal (where the raisins are covered in sugar) and bran flake cereal with fresh, unsweetened raisins, and found that eating commercially marketed raisin bran led to significantly more acid in dental plaque.

Plaque bacteria on tooth surfaces can ferment various sugars, such as glucose, fructose, or sucrose, and produce acids that may promote decay. So if you need to have your raisin bran fix, consider making your own: mix whole bran cereal with $\frac{1}{4}$ cup of unsweetened raisins.

Super-Sized Jaw Pain?

According to a recent story by the British Broadcasting Company, a Taiwanese university professor has determined that large hamburgers are behind the growing number of jaw injuries in Taiwan. Hsu Ming-lung of the National Yang-Ming University warns that patients are showing difficulty opening their mouths after eating the giant hamburgers found on the menus at some fast-food restaurants in Taiwan. The study indicates that problems can arise when attempting to eat burgers or sandwiches taller than three inches. So when it comes to making sure your mouth and jaw are in optimal health—not to mention your waistline—skip those super-sized fast-food burgers and sandwiches.



Space Invaders

When a child loses a baby tooth early through decay or injury, there is a risk that the neighboring teeth could shift and begin to fill the vacant space. This means that when the permanent teeth emerge, there's not enough room for them, resulting in crooked or crowded teeth and difficulties with chewing or speaking, says the American Dental Association. To prevent this, your dentist can insert a space maintainer to fill the spot until the permanent tooth grows in. The space maintainer might be a band or a temporary crown attached to one side of the vacant space. When the permanent tooth starts to emerge, your dentist removes the device so the tooth can grow in its natural space.



Yogurt: It Does Your Breath Good

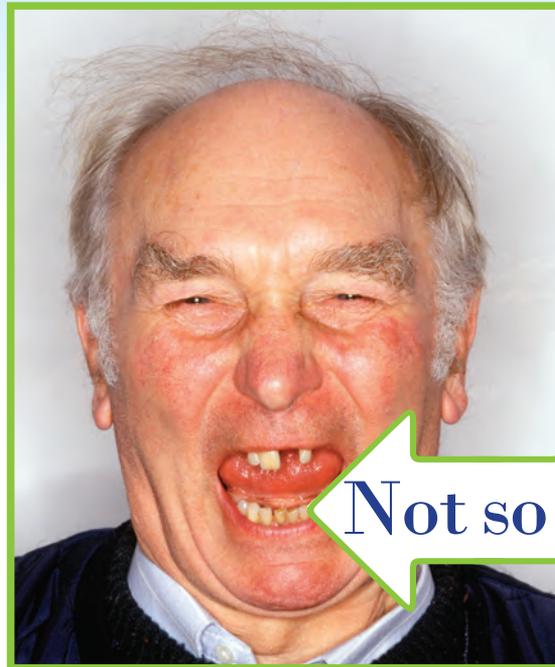
How do you combat bad breath? Popping some breath mints or chewing gum? How about heading to the dairy aisle and picking up some plain yogurt? Bad breath is caused when the bacteria in your mouth—on your tongue, in between your teeth, or even in the back of your throat—builds up. If your mint or gum contains sugar, you may be making your bad breath worse. Researchers in Japan have found that eating plain, sugar-free yogurt may help get rid of bad breath. Yogurt is good for you, for a lot of reasons, and if it helps keep your breath sweet, all the more power for it. Your best bets, though, are brushing regularly with a fluoride toothpaste (and don't forget to brush your tongue) and flossing to get rid of food particles between the teeth.



We can help bridge the *Generation Gap.*



Cute



Not so much

If you're too old for a visit from the Tooth Fairy, ask your dentist to fill you in about all the ways to a better, more attractive smile.

When it comes to restoring your good oral health, you're never too old to discover just how much you may be missing.



Two Willow Street, Suite 200 • Southborough, MA 01745
(800) 342-8747

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