

WORD of MOUTH®

A Semiannual Publication of the Massachusetts Dental Society

Winter-Spring 2010

Does your
dental diet
make the
grade?

A guide for students
See pages 6-7





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The Massachusetts Dental Society (MDS) is pleased to make this 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 Web site 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 Massachusetts Dental Society, Two Willow Street, Suite 200, Southborough, MA 01745-1027, or email mcarman@massdental.org.

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Note from the Managing Editor

You may notice that **WORD OF MOUTH** has a new look. In addition to creating a new logo, the MDS Communications Department has redesigned the entire publication to give **WORD OF MOUTH** a more modern look and feel. We hope you find this new design inviting and, as a result, it encourages you to learn more about your oral health.

We welcome your comments and suggestions. Let us know what you think about **WORD OF MOUTH**'s new look. Email your comments to Managing Editor Melissa Carman, mcarman@massdental.org, or call (800) 342-8747, ext. 260.



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In the Event of an Emergency . . .

One minute, you're running your usual three-miler, or carrying a box of books into your new home, or climbing on the jungle gym, or tossing a baseball back and forth with your brother. The next thing you know, you trip over an unseen crack in the sidewalk, or stumble on the top step, or lose your grip on the monkey bars, or misjudge a fast pitch, and you have a dental injury. There's possibly blood, perhaps a loose or knocked-out tooth, and maybe even some tears. Besides picking yourself up and dusting yourself off, what do you do? Because many dental injuries need immediate attention, the following guidelines from the Massachusetts Dental Society (MDS) can help you effectively deal with a dental emergency:

Broken Tooth or Filling

Immediately rinse your mouth with warm water to clean the area. If swelling occurs, placing cold compresses or ice packs on the face may help. Many pharmacies sell material to temporarily fill the space created by the broken tooth or filling; however, this material may be harmful if left in place too long, so it's important to contact your dentist immediately.

Knocked-out Tooth

Hold the tooth by the crown, making sure to gently rinse the root of the tooth in water if it is dirty. Do not scrub the tooth or remove any attached tissue fragments, as you can damage cells that are necessary for reattaching the tooth to the bone. If possible, gently replant the tooth back into the socket or place it in the space between your teeth and gums. If those options are not possible, put the tooth in a cup of milk or water, or wrap the tooth in a clean, saline-soaked piece of gauze. Do not allow the tooth to dry out, and get to the dentist as quickly as possible, because reimplantation within 30 minutes has the best rate of success. Ibuprofen may help ease pain and discomfort, but be sure to avoid aspirin, which is an anticoagulant that could cause excessive bleeding during a dental trauma.

Bitten Tongue or Lip

Clean the area gently with a cloth and apply cold compresses to keep the swelling down. If bleeding is excessive or does not stop in a short period of time, go to the dentist or a hospital emergency room; be sure to avoid taking aspirin, which could worsen bleeding. Even if the bleeding stops, you will want to make sure the injury is treated properly because the area could easily become infected.

Toothache

Rinse the mouth with warm water to clean the tooth. Use dental floss to remove any food particles that may be trapped between the teeth. See a dentist as soon as possible because the pain could be a sign of something more serious, such as root damage. Ibuprofen may help ease tooth pain until you can get to the dentist.

Foreign Object Between the Teeth

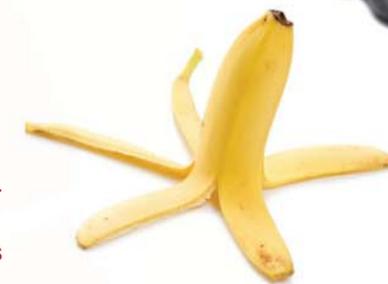
Gently try to remove the object with dental floss. If that does not work, contact your dentist immediately. Do not, under any circumstances, try to remove the object with a sharp or pointed instrument, such as a knife or scissors. You could cause damage to your gums that could lead to infection.

Broken or Possibly Broken Jaw

Regardless of the extent of the injury, all jaw and orofacial injuries should be taken very seriously. Apply ice or a cold compress to control any swelling, and immediately go to the hospital emergency room.

To avoid dental injuries, the MDS recommends the following **Do's**:

- Do avoid chewing ice, popcorn kernels, or hard candy, all of which are known to crack teeth.
- Do not cut or rip things, such as tape or sealed packages, with your teeth. You risk breaking or chipping your teeth, not to mention getting something caught between your teeth.
- Do always wear a mouthguard when participating in contact sports to avoid risk of injury to your teeth, lips, tongue, and jaw.





Dental Stem Cells— Cutting Edge or Weird Science?

When a child loses a baby tooth, it is normally placed under his or her pillow, waiting for the Tooth Fairy to come and collect it and leave behind a little toy or some money in exchange for the tooth. But will children of the future be using those lost teeth for something different, such as growing new teeth or even saving lives? Researchers believe that stem cells found in dental pulp—one of the layers inside the tooth—may hold the potential to do just that. While the full possibilities of tooth-derived stem cells are as yet to be determined, some researchers think that these cells could one day be valuable for regenerating dental and other tissues.

Stem cells are unspecialized cells that have the potential to differentiate into other types of cells with more specialized functions, such as muscle cells, blood cells, or brain cells, which can be used to repair tissues and organs. Stem cell research has been a controversial topic in the last few years, but that controversy surrounds embryonic stem cells, which are harvested from embryos, not the somatic (or adult) stem cells that are generally harvested from bone marrow and umbilical cord blood and have been determined to exist in dental pulp. Since the late 1960s, bone marrow transplants have been used to help cure cancerous diseases that interfere with the production of red blood cells, white blood cells, and platelets, such as leukemia, Hodgkin's and non-Hodgkin's lymphoma, and leukemia, and they may also prove effective with certain lung and ovarian cancers. According to the National Institutes of Health (NIH), stem cells offer the possibility of a renewable source of replacement cells and tissues to treat a variety of diseases, including Alzheimer's, Parkinson's, spinal cord injury, stroke, burns, heart disease, diabetes, osteoarthritis, and rheumatoid arthritis.

But where do teeth come in? According to the NIH, stem cells from baby and wisdom teeth have the ability to make dentin and pulp, and they might even have the ability to make bone. Harvested from the pulp layer inside the teeth, as well as

jawbone and periodontal ligament, these stem cells may one day correct periodontal defects and cleft palate, one of the most common birth defects. The cells also have the potential to save injured teeth and grow jawbone, or maybe even regenerate an entire tooth.

The viability of stem cells derived from baby teeth is determined by when the tooth comes out, says the NIH. The longer a loose tooth is left in the mouth to fall out on its own, the less viable it is as a source of stem cells. To extract the stem cells from teeth, researchers can remove the periodontal ligament, drill into the tooth to remove the crown, and extract the pulp, which is then placed in an enzyme solution to release the stem cells. Cells can be isolated from jawbone by collecting marrow following a tooth extraction or by biopsy.

Do all these exciting scientific findings mean you should start "banking" your child's baby teeth or your own wisdom teeth? Not so fast, say the American Dental Association (ADA) and the NIH. No one knows for certain what the full possibilities are for these dental stem cells, and since the field of dental stem cell research is just emerging, it may be years before their uses are fully determined. Currently, there are no human trials taking place with postnatal cells and there are no clinical applications available, according to the ADA. But just as the "banking" of umbilical cord stem cells has been marketed to expectant parents, dental pulp stem cell tissue banks (including one located in Newton, Massachusetts) have begun to market to both dentists and consumers.

Despite its potential, the future of dental stem cell research is still unknown. Is the discovery of dental stem cells going to have a lasting impact on the dental and medical world, or is this just weird science? Only time will tell. In the meantime, it looks like the Tooth Fairy still has job security.

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For more information on stem cells, visit <http://stemcells.nih.gov/info>.

Don't Chew on This

What do sports drinks, soda, and energy drinks have in common? They all can contain large amounts of caffeine and sugar, and many students consume them in large quantities to keep their energy up during school and after-school activities. But the Massachusetts Dental Society (MDS) warns that there is a new product on the market—energy chews—that may give you more than a buzz; it may also harm your teeth.

Energy chews have been springing up in convenience stores, gyms, sporting goods stores, and other locations across the country. Touted as more convenient than energy drinks, the pocket-sized chews are individually wrapped, come in a variety of flavors such as citrus-mango and chocolate, and promise to deliver the same amount of caffeinated goodness as a cup of coffee. The bites have a chewy texture, and many are made with sugar, corn syrup, and artificial colors and flavors. However, if these chews contain sugar and corn syrup, from a dental standpoint it makes eating them no different than consuming sugary gum and candy, which can lead to cavities and other oral health issues.

Just like their beverage counterparts, the chews promise to enhance your energy level. But since they're about the size and shape of a piece of candy, it's all too easy to overdo it by eating too many. This can eventually lead to oral health issues, such as tooth decay, and chewing the sticky energy chews could even lead to loosened fillings or crowns.

If you decide you still need the burst promised by these energy chews, remember to also maintain good oral health by brushing and flossing regularly, ideally right after you have a chew. The MDS also recommends that you look into many of the other natural ways to take a "bite" out of your slumping energy level—such as taking a walk, adopting a healthy and balanced diet, and getting plenty of sleep at night or taking a power nap during your busy day.



Energy chews

may give you more than a buzz—
they may also harm your teeth.

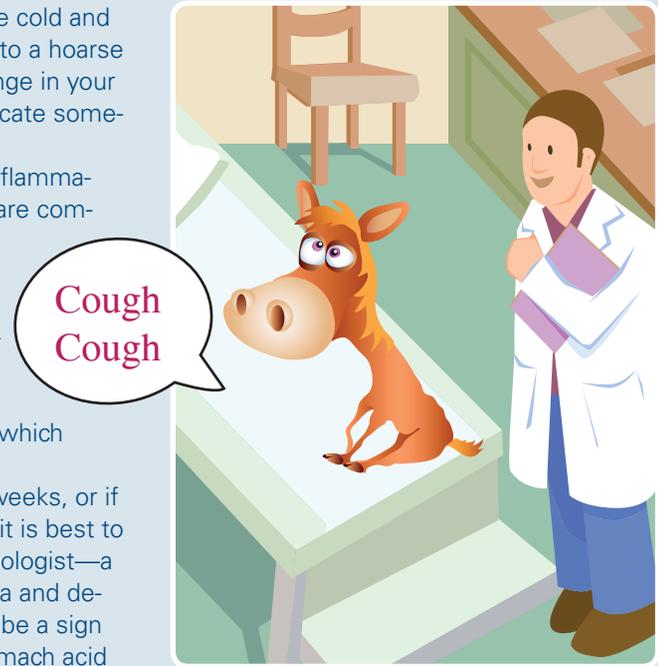
Hoarse Sense

During the cold and flu season, we hear it everywhere—that strained rasp and croak, that cracked whisper—the hoarse voice. For most of us, this is a short-term inconvenience. For some, it's even an exotic change from our characteristic vocalizations. And usually, it fades within a week or two, along with the rest of the cold and flu symptoms, having caused no permanent damage. But when it comes to a hoarse throat, remember to use your horse sense. Any sudden, unexplained change in your voice, persistent hoarseness, throat pain, or trouble swallowing could indicate something more serious than a simple sore throat.

Generally, hoarseness is caused by a strain to the vocal cords or an inflammation of the vocal folds. The most common causes for this acute laryngitis are common upper respiratory infections, such as a cold or flu, or the overexertion of vocals cords, usually a result of speaking or singing too loudly for an extended time. With time and rest, these symptoms normally abate, but they may become aggravated by activities such as smoking, drinking alcohol or other agents that may cause dehydration, and just plain yelling. If proper care is not taken, more permanent damage may occur and lead to chronic hoarseness and the development of vocal nodules and polyps, which result from the scarring of vocal cords and vocal folds.

If any voice- or throat-related condition continues for more than two weeks, or if it has not been associated with a cold or flu, and especially if you smoke, it is best to seek a consult with a medical professional and perhaps even an otolaryngologist—a specialist in the larynx. An otolaryngologist can examine the damaged area and determine the cause, which could be simple laryngitis, but which could also be a sign of something more serious, like gastroesophageal reflux—the flow of stomach acid up into the esophagus—or some kind of growth on the larynx, including cancer.

Remember, when it comes to a hoarse throat, don't horse around.



Does your diet need a dental do-over?

We have all heard the sayings before: “You are what you eat.” “An apple a day keeps the doctor away.” “Milk. It does a body good.” We know that for optimum health, we need to eat a balanced diet with plenty of healthy fruits and vegetables, and limit our intake of sugar and fat. Why? Because what we eat affects our overall health, and that includes our oral health. And while it’s easier to keep your diet tooth-friendly when you’re stocking your own fridge and cooking your own meals, if you are a college student who’s out of the house for the first time, away from the watchful eyes of Mom and Dad, you may not be aware that the food choices you make when you’re running to make a class can have a big impact on your smile.

Most college students—and many high school and grammar school students—eat the majority of their meals in a cafeteria or dining hall, and they may not realize how their food choices affect their oral health. Below is a typical menu for a day in the life of a college or high school student—followed by some suggestions on how to make healthier choices. However, given that this is a fast-paced world where everyone is juggling jobs and commitments and where many people routinely hit the drive-thru for lunch or dinner, these tips really apply to everyone. With a few simple changes, we all can improve our oral health diet.

Breakfast

Before

1. Bowl of raisin bran cereal with 2% milk
2. Glass of fruit juice
3. Cup of tea with sugar

After

1. Cereal is not a bad choice (extra points for not selecting one of the super-sugary kids’ cereals). However, a study conducted by the University of Illinois suggests that adding raisins to any cereal, rather than buying a cereal with raisins already in it, may be a healthier option, given the added sugar in these cereals. Milk is a good choice because it is an excellent source of calcium, which helps teeth fight tooth decay and gum disease.
2. Fruit juices can have a high sugar content and hardly any fruit, so be sure to check the label and make sure you’re drinking 100% fruit juice. A better choice is orange juice, which contains a high amount of vitamin C, which helps teeth fend off tooth decay and gum disease. An even better choice would be to peel a whole orange and eat that as part of your breakfast. You’d be getting all the vitamin C and fiber, and none of the extra sugars. To wash it down, have a glass of milk or water.
3. According to WebMD, unsweetened tea—especially green tea—is one of the best drinks you can choose for oral health. However, adding sugar to tea increases the risk of tooth decay, so try to cut back on the amount of sweetener you put into your beverages.

Midmorning Snack

Before

1. Chewing gum

After

1. As it turns out, the American Dental Association (ADA) has given sugarless chewing gum the seal of approval, so there is no need to feel guilty about chewing gum between meals. Studies have shown that chewing sugarless gum is, in fact, beneficial to oral health. It helps to produce saliva, which not only neutralizes mouth acids but also helps dislodge food particles from between teeth. In short, gum can help to prevent tooth decay and cavities, but just make sure you’re chewing sugarless gum.

Better yet, grab a stick of gum containing Xylitol, which is a natural sugar alcohol found in raspberries, strawberries, and other natural sources. Xylitol has been found to keep the bacteria that cause tooth decay from sticking to the surfaces of the teeth, reducing the amount of plaque formed.

Lunch

Before

1. Hamburger with french fries
2. Can of soda
3. Cookie

After

1. Starchy carbohydrates, such as bread and potatoes, can be harmful because their soft particles can stick to teeth. And when the bacteria in your mouth feed on these particles, it leads to tooth decay. A better choice would be a salad with a piece of fish, which is an excellent source of vitamin B3, also known as niacin, which can also be a good ally in battling bad breath and even canker sores.
2. Whether you choose regular or diet soda, you’re making a bad choice for your teeth. One can of regular soda contains as much as 10 teaspoons of sugar, but it’s not just the sugar that can wreak havoc with your oral health. All sodas, diet or regular, contain phosphoric acid and citric acid, which can wear down tooth enamel. The healthiest drink choice you can make is water because it hydrates your gums and rinses away particles caught between teeth, which helps prevent cavities. But be sure to drink water that’s been fluoridated because fluoride helps prevent tooth decay.
3. For dessert, try having a piece of fruit. Snacks, such as cookies or cake, can be harmful to teeth due to the large amount of sugar. Eating a firm fruit, such as an apple, is a healthier alternative because it helps the mouth to produce saliva, which washes away food particles that can stick to your teeth.

Afternoon Snack

Before

1. Candy bar and small pack of potato chips

After

1. Since there is normally a long time between lunch and dinner, especially with the hectic schedule of a student, you may need a snack or two to get through the day. However, there are better alternatives than buying a candy bar from a vending machine. According to the ADA, the best snacks for healthy teeth are fruits, vegetables, cheese, or plain yogurt. Dairy products are an especially good snack, and not just because calcium is good for teeth and bones. Researchers from the American Academy of Periodontology found that people who consumed more dairy products had a lower incidence of gum disease. However, since these healthier options may not be as readily available from vending machines, try bringing your own healthy snacks from home.

Dinner

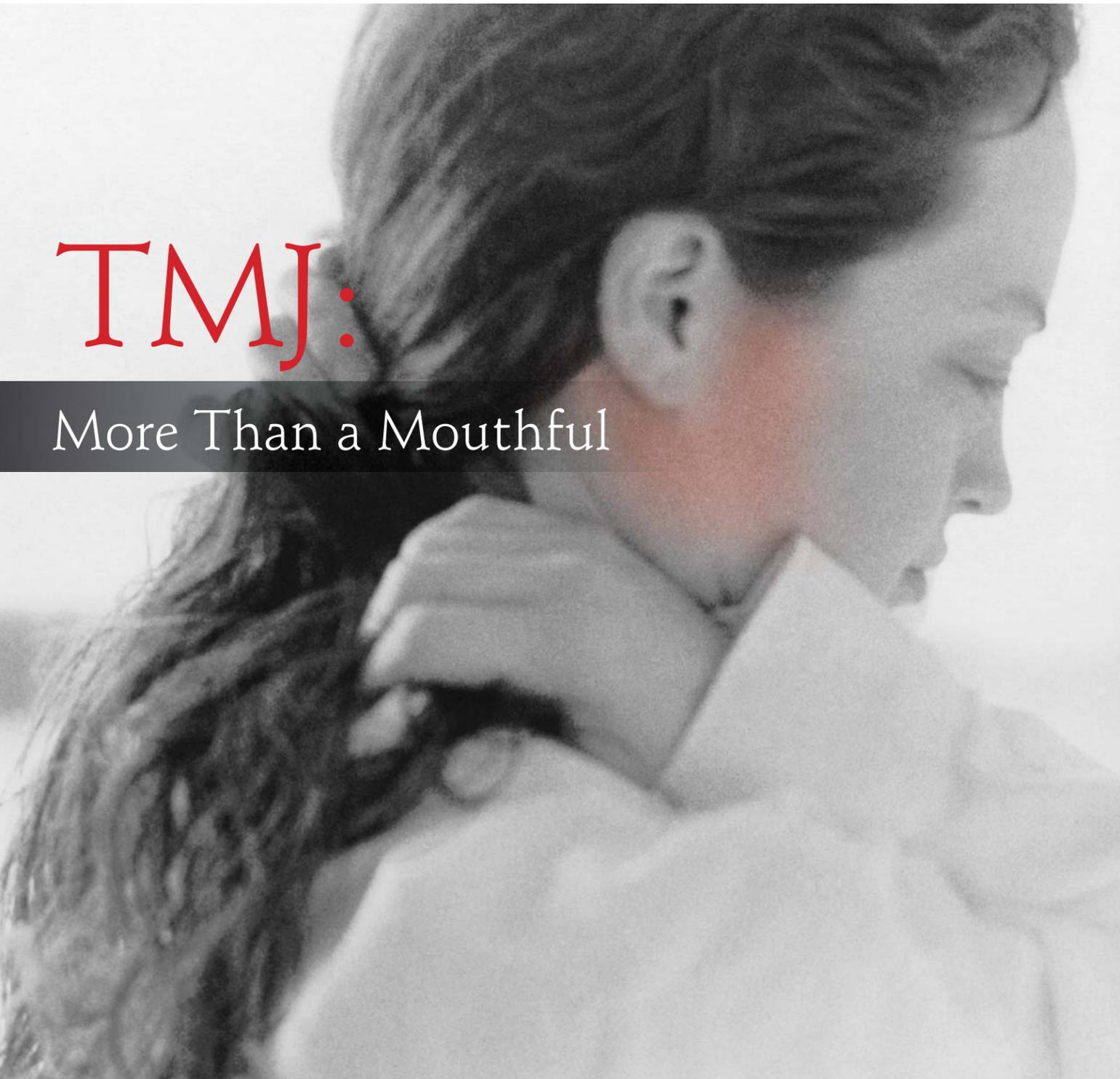
Before

1. Spaghetti and meatballs with a small side salad
2. Glass of soda
3. Dish of ice cream

After

1. Instead of having a small salad and a larger serving of pasta, why not reverse it? Have a large salad with leafy greens, lots of vegetables, chicken, and topped with a few pieces of cheese (there’s that dairy again!). Firm vegetables, such as celery and onions, initiate the flow of saliva, which helps neutralize acids in the mouth while also washing down food particles. Chicken is another great source of vitamin B3, which helps fight bad breath.
2. As we’ve already mentioned, soda can cause erosion of tooth enamel and, if you drink sugary soda, tooth decay, as well. Your best bet would be milk, water, or unsweetened tea.
3. As for dessert, there’s no need to skip the ice cream, but you’ll want to limit how much you have. According to the ADA, when you eat a sugary food with a meal as opposed to on its own, it causes less damage to teeth because there is more saliva generated during a meal. Therefore, go ahead and have a little something sweet with your meal, but just make sure to brush your teeth afterward.





TMJ:

More Than a Mouthful

TEMPOROMANDIBULAR JOINT

RADIATING PAIN

MUSCLE STIFFNESS

LOCKING OF THE JAW

Do you sometimes hear a weird clicking sound in your jaw when you yawn, chew, or maybe even open your mouth to say something? It may seem like nothing, but that clicking noise could be a sign of something bigger and potentially threatening to your oral and overall health: temporomandibular joint (TMJ) disorder. That's quite a mouthful to say, but it could have even more than a mouthful of health implications.

An estimated 10 million Americans suffer from TMJ pains, according to the National Institute of Dental and Craniofacial Research (NIDCR). Common symptoms include pain in or around the ear, tenderness of the jaw, clicking or popping noises when opening the mouth, or headaches and neck aches. Most people suffering from TMJ disorders have relatively mild forms, where their symptoms improve significantly or disappear spontaneously within weeks or months, according to the NIDCR. However, for others, the condition causes long-term, chronic, and debilitating pain.

A variety of symptoms are linked to TMJ disorders, the most common being pain in the chewing muscles and/or jaw joint. Other symptoms include: radiating pain in the face, jaw, or neck; jaw muscle stiffness; limited movement or locking of the jaw; painful clicking, popping, or grating in the jaw joint when opening or closing the mouth; and a change in the way the upper and lower teeth fit together.

Just what is the temporomandibular joint and why is it so important? The TMJ is the joint connecting the lower jaw to the bone at the side of your head. This joint is flexible, allowing the jaw to move smoothly up and down and side to side, in turn enabling us to talk, chew, and yawn. In addition, there are muscles attached to and surrounding the jaw joint that control its position and movement, and when we open our mouths, the rounded ends of the lower jaw glide along the temple's bone socket. When we close our mouths, they slide back to their original position. To make the TMJ joint even more complex, a small disc lies between the lower jaw and the temple's bone, helping to keep these movements smooth and absorbing shocks to the jaw joint from chewing and other movements.

All of these parts make the TMJ one of the most complicated joints found in the human body, and because of its complex movement, the TMJ and its controlling muscles can pose a tremendous challenge to patients and health care providers alike when problems flare up.

According to the NIDCR, disorders of the TMJ and chewing muscles fall into three categories: discomfort or pain in the muscles that control jaw function; a displaced disc, dislocated jaw, or injury to the lower jaw; and arthritis in the TMJ joint. An individual may have one or more of these conditions at the same time.

Trauma to the jaw or TMJ can play a direct role in some TMJ disorders, but the cause for most TMJ problems is unknown, says the NIDCR. The symptoms can start without obvious cause. Stress and tooth grinding have been discussed as causes of TMJ disorders, but their role is unclear because not everyone with TMJ disorders grinds their teeth, and alternately, many longtime tooth grinders do not have painful joint symptoms. Other factors that relate to the way teeth fit together—the bite—may cause some types of TMJ disorders, according to the American Dental Association.

TMJ disorders may be treated in several ways. Your dentist will recommend what type of treatment is needed for your particular problem or recommend that you be referred to a physician or specialist. For most people, the discomfort that comes with TMJ disorders will eventually go away with little or no treatment, says the NIDCR. Some simple steps that may help temporarily alleviate the symptoms include eating soft foods, applying ice to the area, and avoiding extreme jaw movements like wide yawning and gum chewing. Short-term use of over-the-counter pain medicines and adoption of stress-reduction techniques have also been shown to provide relief.

Diagnosis is an important step before treatment, so be sure to see your dentist if you are suffering from any of the symptoms described in this article for an extended period of time.

Insurance for Your Teeth in Tough Times

For the past several years, the news reports have all been the same: real estate sales are down, home foreclosure rates are up, the unemployment rate continues to rise, and the cost of everything from milk to clothes to toothpaste is on the increase. So, in the face of all of this depressing news about the difficult economy, what can you do to turn your frown upside down? The Massachusetts Dental Society (MDS) believes that it's more important than ever to have a positive and proactive approach in taking care of your teeth, which will help you keep some extra money in your pocket.

In addition to regular checkups, practicing dental hygiene at home is equally essential. Brushing and flossing will help keep your teeth in good shape and remove plaque, the sticky film that can build up on tooth surfaces. And if the bottom line is dictating what you buy these days, the MDS recommends taking the time to find out what brands of toothpaste and floss that carry the American Dental Association seal of approval are on sale at your local retail store, supermarket, or pharmacy.

Keep in mind, though, that when it comes to your oral health, prevention is key in any economy. Dental disease, by and large, is preventable. Good home care—brushing and flossing—is important every day. Neglect can cost a lot of money in the long run.

Money can also be saved by avoiding costly sweets and drinks. In times of stress, we often turn to comfort foods, such as candy, starchy

At times of economic downturn, it's vital that you don't skimp on taking care of your health. It's especially important to continue regular dental visits, which are "insurance for your teeth" and could actually save you money in the long run. Your dentist will be able to catch any potential problems early when they can be more easily treated. This can save you money by preventing more costly dental treatment and procedures later on. You can also save money by having your dental treatment completed in phases or working with your dentist's office to create a payment schedule. Some dental offices can help you with payment plans, so it is a good idea to ask what payment options they offer.

baked goods, soda, and sugary coffee drinks to soothe our nerves. Limiting your intake of these foods and beverages can help both your oral health and your wallet. Drinking tap water, especially if it's fluoridated, is a great alternative to pricey bottled water and soda. And healthy snack choices mean healthier teeth.

In addition to saving money by maintaining your oral health, you may find that a healthy smile can help you in your professional life and can go a long way toward improving your self-esteem. A positive outlook on your appearance and a healthy smile can also be invaluable during a job interview, as well as helping to boost your spirits. And who couldn't use a little of that these days?

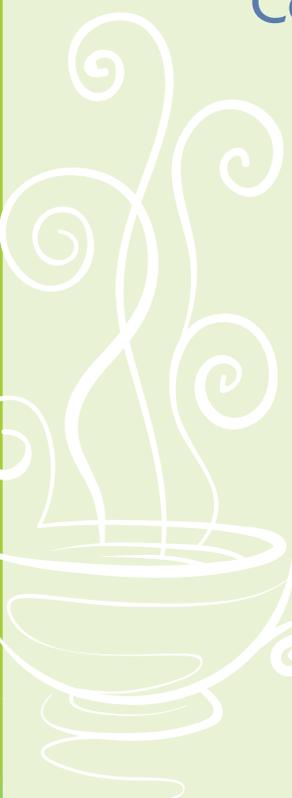


TOOTH "PICKS"

Get Flossed Out When You're Stressed Out

According to *Prevention* magazine, 56 percent of people say they brush and floss less when they are stressed. But you want to take extra special care of your teeth during times of stress because stress can make you more susceptible to gum disease. Brazilian researchers found that elevated levels of the stress hormone cortisol may impair the immune system, allowing bacteria to invade the gums. And having healthy teeth and gums is certainly one less thing to be stressed about!

When It Comes to Tea, Cool It Now



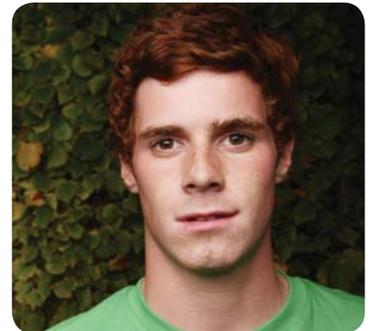
A study published last year in the *British Medical Journal* suggests that drinking very hot tea may cause throat cancer. The researchers, who looked at the tea-drinking habits of 300 Iranians diagnosed with esophageal cancer as well as 571 healthy Iranians, theorize that drinking very hot tea (greater than 158 degrees Fahrenheit) may be associated with an increased incidence of throat cancer. They found that people who drank tea less than two minutes after pouring were five times more likely to develop throat cancer, compared to those who waited four or more minutes. Researchers are not clear how the hot tea might cause cancer, but one theory suggests that repeated thermal injury to the lining of the throat somehow initiates it. This theory definitely calls for further study, but when it comes to drinking any hot beverage—and to avoid burning your tongue—you may be better off just chilling out.



Germ-Proof Your Brush

With all the warnings about the H1N1 virus—not to mention the regular old cold and flu viruses—it's a good reminder to keep your toothbrush "healthy" too. Germs and bacteria can spread easily in a moist environment like a bathroom. So if someone in your home is sick, you may want to sterilize your toothbrush. And if you are the one recovering from a cold or flu, you should consider replacing your brush with a new one. Also, make it a habit to replace your toothbrush every three to four months, since frayed bristles are less effective at removing plaque.

Are people with red hair more sensitive when it comes to going to the dentist? According to an article in the *Journal of the American Dental Association*, 46 percent of redheads avoided going to the dentist—twice the number of their dark-haired counterparts. What's making them act so gingerly when



Seeing RED?

it comes to going to the dentist? According to these researchers, redheaded and fair-skinned people have a gene mutation that affects not only hair color, but also sensitivity to anesthesia. It's believed that redheads may sense pain more easily and may require more anesthesia; in fact, a 2004 study found that redheads required 20 percent more anesthesia than their blond or dark-haired counterparts.

Open Wide and Say...



“OH”

Oral **H**ealth is part of
Overall **H**ealth.

From heart disease to stroke, to diabetes, to osteoporosis, to low-birth-weight babies, there is growing evidence showing that all may have their roots in your teeth and mouth.

To learn more or to find a dentist in your area, log on to massdental.org or call us at (800) 342-8747.

Your Mouth
Can Say a Lot
About You.

