


Word^d OF MOUTH[®]

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Bubble
Trouble?



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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 more information regarding oral health, please visit the Public Resources section of the MDS website at massdental.org.

Your comments and suggestions regarding **WORD OF MOUTH** are always welcome. All correspondence and requests for additional copies may be sent to:

Melissa Carman
Director of Publications
Massachusetts Dental Society
Two Willow Street
Southborough, MA 01745-1027
Email: mcarman@massdental.org

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Robert E. Boose, EdD, *Executive Director*

Melissa Carman, *Director of Publications*

Michelle Weaver, *Graphic Designer*

Todd Belfbecker, DMD, *Consultant*

Bubble Trouble?

Is Sparkling Water Safe for Your Teeth?



You know that soda isn't a healthy way to quench your thirst, but sometimes you just want a little fizzy burst, so you reach for a sparkling water or seltzer. But do those little bubbles spell trouble for your teeth? Before you put that glass down, here are some facts on the fizz.

The high sugar content and acidity levels of soft drinks, sports drinks, and juices have long been linked to increased tooth decay. Most soft drinks—even diet—contain phosphoric acid and citric acid, which wear away the tooth's enamel, weakening the tooth and paving the way for cavities. While sparkling water is similar to any carbonated beverage in that it is made with carbon dioxide gas under pressure and contains acid, in actuality it is not as bad for your teeth as soda or juice because it has a slightly lower acid level.

The acid level in beverages is measured using a pH scale, which ranges from 0 to 14. A pH of 7 is considered neutral, a pH less than 7 acidic, and a pH greater than 7 basic. Beverages with a pH of less than 4 are potentially damaging to the dentition—therefore, the lower the pH level, the more acidic a beverage. (The normal pH range for saliva is 5.6 to 7.9, according to the *International Journal of Drug Testing*.) To give you a frame of reference, water, which is as neutral as it gets, has a pH level of 7 and milk, long known to be one of the healthiest things you can drink for your teeth, has a pH of 6.9. A 2016 study in the *Journal of the American Dental Association* reviewed pH levels of non-dairy beverages in the United States, and sparkling water bubbled to the top. In the study, Canada Dry Club Soda had a pH level of 5.24 and Perrier carbonated mineral water had a level of 5.25. In contrast, sugar- and acid-laden Coca-Cola Classic had a pH level of 2.37 and Tropicana Lemonade came in at 2.70.

The American Dental Association (ADA) also reports on a study comparing the effects of water and sparkling water on tooth enamel. In the study, researchers submerged teeth—donated for research—into containers of regular water and sparkling water to determine the level at which both liquids attacked tooth enamel. The good news is that the results were similar and that even though sparkling water is slightly more acidic, it did not have a stronger effect on the enamel than plain water.

So for the millions of sparkling water fans in the United States (in 2017, sparkling water sales increased 27.5%, according to Beverage Marketing Corporation), there's no need to go flat. Sparkling water is a far better choice for your teeth than sugary drinks. You can still get your fizz on by following these helpful tips from the ADA:

- In addition to sparkling water, be sure to drink plenty of regular, fluoridated water, which naturally helps fight cavities, rinses away food and particles in the mouth that breed cavity-causing bacteria, and prevents your mouth from becoming dry, which can put you at a higher risk of cavities.
- Be aware of what's in your bottle or glass because not all sparkling waters are created equal. Citrus-flavored sparkling waters often have higher acid levels that increase the risk of damage to your enamel. You should try to drink these in one sitting or with meals. Don't sip your sparkling water throughout the day, as sipping exposes your teeth repeatedly to acidity. Also, sparkling water with added sugar is no longer "sparkling water" but in reality is a sugar-sweetened beverage that can actively contribute to your risk of developing cavities.



The Dangers of “Dr. Google”



Technology has really changed the way we live and communicate. Twenty years ago, if you were driving to someplace you'd never been before, you either scribbled directions on a piece of paper or stopped at a gas station to ask for help. These days, with the simple click of a button on your smartphone, up-to-the-minute GPS-enabled directions are read to you through your car's speakers. Pretty cool. Technological advances such as smartphones and the Internet have made it beyond easy to find a world's worth of information right at your fingertips, including an abundance of health information. And although it's certainly convenient to just “ask Dr. Google” what's causing your knee to throb or what that white patch on your tongue is, you're better off asking someone with a real degree, because while there is certainly good information to be found online, there is also a lot of bad information. And you don't want to jeopardize your oral (and overall) health.

Let's say you wake up one morning with a toothache. You pull up a search engine and type in “toothache causes,” and 0.53 seconds later you're staring at 12,500,000 results. That's a lot of information, and the problem with these results is the spectrum of data. Yes, some of the information you find will be legitimate and accurate (pssst: the American Dental Association is always a safe bet), but it's all too easy to get lost in the face of a daunting number of pages, many of which are not vetted by oral health professionals.

Even worse, if you find yourself on a web forum—such as Reddit—you could be led astray by commenters downplaying symptoms or giving flat-out wrong information.

The fact is that a toothache could be the symptom of a litany of oral health conditions, such as tooth decay (or a cavity), gum inflammation or disease, an abscess, a fractured tooth, a broken filling, sensitivity, sinus issues, teeth grinding (aka bruxism), and complications from impacted wisdom teeth. Self-diagnosing could be dangerous to your health, because what if what you think is just teeth grinding turns out to be something more serious like an abscess? With the help of an examination, your dentist is the only one who can accurately diagnose the cause of your dental distress and provide the treatment to help you be on your way to a happier and healthier smile. Dentists are highly educated and receive a minimum of four years of dental education on the diagnosis, prevention, and treatment of diseases and conditions of the oral cavity. They are the only experts on oral health.

The Internet can be a great resource for learning more about the side effects of a new medication, finding support from people who share a medical condition, or reading reviews of a toothpaste for sensitive teeth. It's *not* the place to go for self-diagnosis. So, the next time you feel compelled to consult “Dr. Google” for what ails your mouth, close your laptop, pick up your phone, and call your dentist.



The Gum Disease–Cancer Link

Much has been reported over the years about the strong link between oral health and overall health and the important clues to other health issues that teeth and gums hold. Periodontal (gum) disease has been shown to be a precursor or indicator of cardiovascular disease, stroke, diabetes, and low-birth-weight and/or premature births. It's important to understand this link, because one out of every two Americans aged 30 and over has some form of periodontal disease, according to the U.S. Centers for Disease Control and Prevention (CDC). Now a new study is claiming that people with severe gum disease (periodontitis) may have an increased risk of developing certain types of cancer.



The research, which was published in the *Journal of the National Cancer Institute* in January 2018, is the largest study looking at the association between gum disease and overall cancer risk. Researchers from the Tufts University School of Medicine, the Johns Hopkins Bloomberg School of Public Health, and the Tufts University School of Dental Medicine evaluated 7,466 people from the late 1990s to 2012 using data from comprehensive dental examinations. They found that participants who were diagnosed with periodontitis had a 24% increase in the risk of developing cancer compared to those with either no or mild gum disease.

The researchers also found that the association was strongest for lung cancer, followed by colorectal cancer—even when adjusted for cigarette smoking, which is a known cause of cancer. In fact, they found that those subjects with no history of smoking who were diagnosed with periodontitis still had an increased risk of lung and colorectal cancer. No associations were found for risk of breast, prostate, or blood and lymphatic cancer. The study is also notable because it used dental exams to measure and classify the severity of gum disease, whereas many previous studies relied on self-reporting.

While the researchers admit that the presence of periodontitis does not necessarily mean that one will develop cancer, they point to the importance of further study into the connection, as well as the importance of maintaining healthy gums. Gum disease, which is also called gingivitis in its early stages, results when bacteria in plaque—the film that forms in the mouth and can adhere to teeth—builds up between the teeth and gums, causing the gums surrounding the teeth to become inflamed. If the inflammation is not treated and becomes more severe, it can cause the gums and supporting bone structure to deteriorate, leading to gum recession, pocketing (or separation of the gum from the tooth, allowing bacteria to collect under the gums and along the roots), and worst case—tooth loss. Signs of gum disease include bleeding or puffy gums, loose or shifting teeth, bad breath or a bad taste that won't go away, and receding gums. If you notice any of these symptoms, see your dentist.

Decrease your risk of gum disease (and potentially cancer) by brushing at least twice a day for two minutes each session with a fluoridated toothpaste and flossing every day, along with visiting your dentist twice a year. These dental essentials will keep your oral health in check, which in turn will help keep the rest of you on a healthier path.



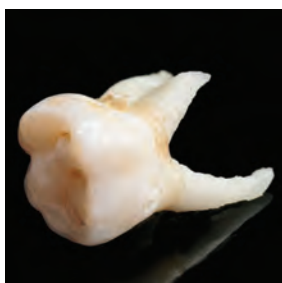
Dealing with a **DENTAL EMERGENCY**

Let's face it: Accidents will happen. You're walking down the street and you trip on the curb and fall face-first onto the sidewalk. Your car gets rear-ended and your face hits the airbag or steering wheel. You're playing an informal game of soccer in the yard with your pals and the game abruptly ends when you take a soccer ball to the mouth. The initial shock from the trauma wears off, but you're left with blood in your mouth and a dislodged tooth in your hand (and possibly some tears). What should you do? Saving a tooth depends entirely on what is done within the first 30 to 60 minutes, and the following guidelines will 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 a 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 touch the roots! Also, do not scrub the tooth or remove any attached tissue fragments, as you could damage cells that are necessary for reattaching the tooth to the bone. If rinsing with water does not remove dirt, leave the dirt in place. Again, do not touch or scrub the roots! If possible, replant the tooth by biting down gently on a towel or handkerchief. If this doesn't work, put the tooth in a small container of cold milk (if milk is not available, you can use water; milk is better, though) or wrap the tooth in clean, saline-soaked gauze—do not allow the tooth to dry out.



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 after a short period of time, go to the dentist, an urgent care clinic, or the emergency room. Even if the bleeding stops, you want to make sure the injury is treated properly, because the area could easily become infected. If the bleeding doesn't stop, avoid taking aspirin, which could cause excessive bleeding.



TOOTHACHE

At home, you can floss to rule out pain caused by trapped food, rinse with salt water, and take ibuprofen as needed, but most importantly, call your dentist for proper diagnosis and treatment.



FOREIGN OBJECT BETWEEN THE TEETH

Gently try to remove the object with dental floss. If that doesn't 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.



JAW INJURIES

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.

While you can't always avoid accidents (they wouldn't call them "accidents" if you could), you can be prepared to react to any dental injuries and turn those tears to smiles.



Word Decoder

Dr. Dennis Dentin and Dr. Pearl E. White have a favorite saying. They say it to all of their patients every day. Can you figure it out?

,

R

_____ _____ _____ _____ _____ _____ _____ _____
 ●●●● ◆★ ◆●●● ◆◆ ◆★ ◆◆ ◆★ ★
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_____ _____ _____ _____ _____ _____ _____
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_____ _____ _____ _____ _____
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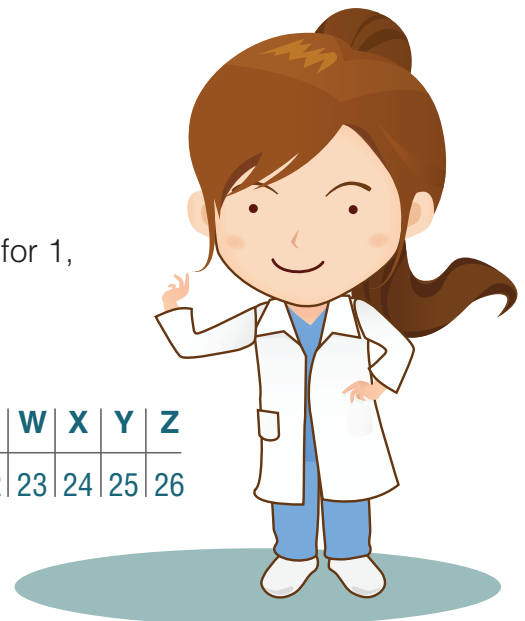
◆ = 10 ★ = 5 ● = 1

Add up the numbers represented by each set of symbols and replace them with the corresponding letter.

For example, the first letter in the second word is R.

A diamond counts for 10, a star counts for 5, and each circle counts for 1, so $10 + 5 + 3 = 18$, and the 18th letter of the alphabet is R.

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26



CANNING TOOTH DECAY



More and more children and teenagers today have made drinking soda and other sugar-sweetened beverages a part of their daily routine, including at mealtime. As a result, the dental community is seeing more evidence of tooth decay in young people.

The American Heart Association recommends that kids ages 2 to 18 should have less than 25 grams, or 6 teaspoons, of added sugars daily. One 12-ounce can of regular soda contains 10 teaspoons of sugar—about 65% more added sugars than the recommended daily limit. Supersizing your beverage to a 20-ounce bottle contains 16 teaspoons of the sweet stuff—230% more added sugars than the recommended daily limit!

Drinking sugar-sweetened beverages can play a major role in dental decay. Even with regular brushing and flossing, both regular and diet sodas can break down the enamel of teeth. Tiny bacteria live between and around teeth and, when exposed to the sugar in soft drinks, produce an acid that causes damage to tooth enamel, which eventually leads to decay and cavities. And it doesn't take long—this acid can begin to wreak havoc in only 20 minutes.

Kick that sugary soda habit to the curb and have a glass of water instead. Your teeth—and your body—will thank you.

Sugar Content in Beverages

