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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.

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## 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.

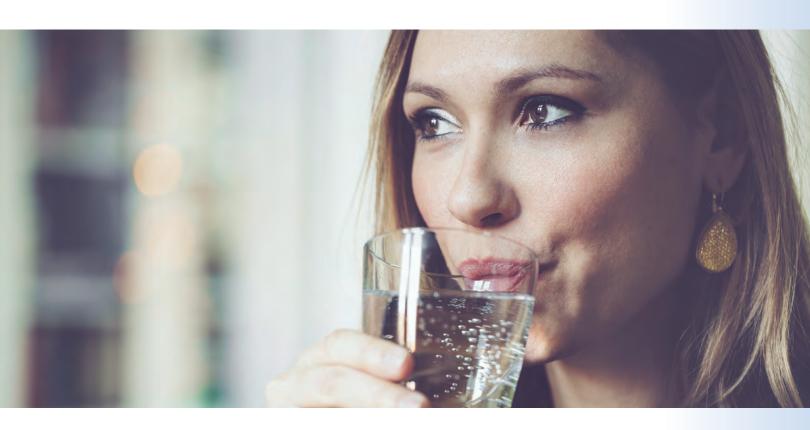
The high sugar content and acidity levels of soft drinks, sports drinks, and juices have long been linked to increased tooth decay. Most soft drinks—even diet—contain phosphoric acid and citric acid, which wear away the tooth's enamel, weakening the tooth and paving the way for cavities. While sparkling 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. Citrusflavored 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.



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