What's all the fizz about?

Sparkling, carbonated, seltzer, club soda, mineral water, tonic and soda water; just a few of the names in the latest water craze. According to the Beverage Marketing Corporation, about ten years ago the bubbly drinks and bottled water segments comprised only a three percent market share with soft drinks making up the balance. Today, bottled water and carbonated water consumption have surpassed soft drinks.

This significant shift is attributed to consumers perceiving bubbly beverages to be better for them and a healthier alternative than a carbonated soft drink—regular or diet—and a demand for product variety.

But, are these new options really a better alternative to water and are they all the same? In short, no. To understand why, you need to know about the content of each, as well as any adverse or negative concerns in consuming the beverage in place of water.

Sparkling water: Also known as carbonated water, is made by infusing carbon dioxide into water under pressure which creates the effervescence. This produces carbonic acid with an acidic pH of three to four (seven is neutral). For comparison, A&W Root Beer (4.75 pH), Diet Coke (3.65 pH), Diet Mountain Dew (3.36 pH), Sprite (3.29 pH), Pepsi (2.53 pH), Coca-Cola (2.52 pH) and RC Cola (2.38 pH).

The American Dental Association warns that highly acidic beverages can harm teeth because dentin dissolves below a pH of 6.5 and tooth enamel dissolves below a pH of 5.5. Dentin is the layer beneath the tooth enamel. surface.

The effect of soft drink consumption on bone health—bone mineral density (BMD) and bone mineral content (BMC)—has been a highly studied and debated topic for many years. It was believed carbonated beverages because they contain phosphoric acid affected bone mineral density making people prone to fractures. In the Framingham Osteoporosis Study, researchers reported in the *American Journal of Clinical Nutrition* that women who drank specifically cola soft drinks had a significantly lower BMD at each hip. but not their spine. Men showed no difference. Similar results were seen with diet cola intake and, although weaker, for decaffeinated cola. No affect was noted with noncola beverage consumption. Researchers also reported that total phosphorus intake was not significantly higher in daily cola consumers than in nonconsumers, but the calcium-to-phosphorus ratios were lower.

However, other research on the affect of carbonated beverages and bone health reported no negative evidence. Nearly all the research done to date made mention on the importance of maintaining appropriate calcium and phosphorus intake for good bone health because one without the other can affect bone growth and strength. They also noted the most common form of calcium consumption by study participants under age 50 came from milk, and from supplements in those older than age 50. In several studies, researchers noted that they and physicians are concerned about growing children and women substituting soft drinks, or the new carbonated waters for milk.

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Other claims attributed to sparkling water include weight loss, irritable bowel syndrome (IBS) and weight gain. Research again found none of these to be true. Carbon dioxide is not an appetite suppressant and will not stay in your stomach any longer than plain water. IBS is not caused by carbonation, but carbonation can contribute to bloating and gas and it won't cause weight gain. However, not all waters are created equal so it is important to read the nutrition label carefully to see what sweeteners, flavor enhancers or other additives are in the water that can contain hidden calories and extra sodium.

Seltzer water: Is the same as sparkling or carbonated water, however the flavorings actually can lower the acidic level so it is on par with orange juice at 3.7 pH. Seltzer water is the water in LaCroix.

Club soda: Is water that has been carbonated, but unlike seltzer, it has the addition of sodium salts and/or potassium salts in the water. These can include table salt and sodium bicarbonate (baking soda) and give it a slightly saltier taste than seltzer. The pH level for carbonated club soda is 3.69.

Sparkling mineral water: Made with natural spring or well water, it has naturally occurring minerals (like salts and sulphur compounds) which sometimes give the water a natural carbonation; other times, carbon dioxide is added. The taste is dependent upon where the water is drawn and the amount and type of naturally occurring minerals. Popular brands such as San Pellegrino and Perrier have a pH of 5.6

Tonic water: Considered a carbonated soft drink, tonic water has carbonic acid in it in as well as dissolved quinine and often high fructose corn syrup. Originally used as a prophylactic against malaria, tonic water today typically has a significantly lower quinine content and is consumed for its bitter flavor. The pH of tonic water is 3.

Soda water: This is an ambiguous term used since carbonated water became popular in the late 1800s. It is what the first commercially available artificially carbonated water was called. Today, the term *soda water* is frequently used interchangeably with *seltzer and/or club soda*. If salt or other additives are a concern, it is best to make sure you know what to order or read the label before you purchase.

So, next time you reach for a refreshing healthy beverage, remember not all waters are equal and read the labels before you drink.