

Catch a Burp from a Soft Drink

By Anni Matsick

Study the gas that puts the fizz in soda pop.

Burping is not polite in public, even for a soda bottle. And when a soda bottle burps, it can make a mess. So you must do this experiment over the kitchen sink. It will show you why you sometimes feel the urge to burp after having a soft drink.

The experiment is based on the fact that salt will release gas that has been dissolved in water. If you add a teaspoon of salt to a freshly opened bottle of soda pop, gas and foam will come rushing out. You can use the following trick to catch the gas in a balloon.

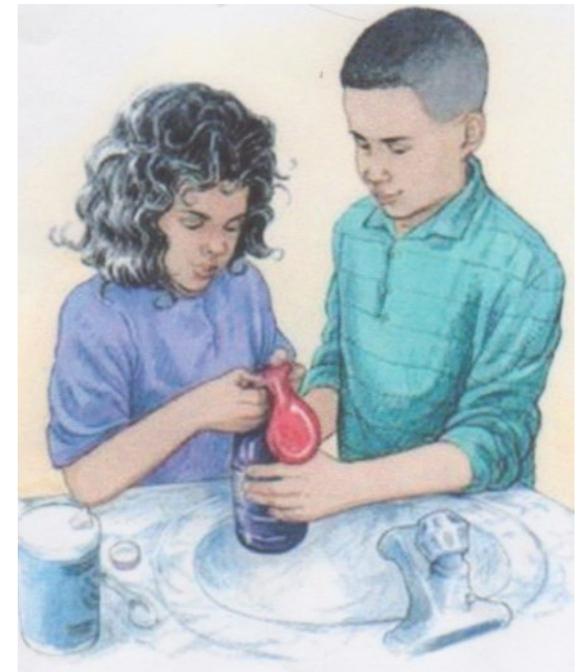
Choose a new balloon or a used one that you know is dry inside. Its neck must be large enough to fit over the mouth of a small, full soda bottle (one that holds twenty ounces or less). Put about a teaspoonful of salt into the balloon.

Remove the cap from the bottle. Now ask a friend to hold the bottle steady over the sink while you fit the opening of the balloon onto the bottle. Be sure to keep the round end of the balloon hanging down so that no salt falls into the soda yet.

As you hold the balloon tightly in place on the bottle neck, lift the end of the balloon straight up so that the salt pours into the soda.

Now you will see the burp going up into the balloon. Foam will go up, too. As you watch, the liquid from the foam will drain back into the bottle, and you will be left with a balloon full of gas.

Most of the gas in your balloon is carbon dioxide, which is used to make all carbonated drinks. Since you swallow about this much gas with each soda, you can see why you feel the need to burp afterward.



Carbon dioxide is an interesting gas. You have already seen that it can be dissolved in water. All of the gas in the balloon was dissolved in the soft drink. To taste the gas, pour a small drinking cup about one-quarter full with fresh soda, then add salt into the soda a little at a time until the soda no longer fizzes. You will have a cup full of carbon dioxide with some flat, salty soda pop in the bottom. (The gas is heavy, so it will force the air out of the cup.) Taste some of the invisible gas the same way you would taste a drink. It can't hurt you. But it will taste pretty sour because carbon dioxide dissolves in water (such as your saliva) to make a mild acid. Now you know why sodas fizz and why, after you drink a soda, the burp tastes sour.

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