How Much Sodium Does a Water Softener Put into Your Water?

Well, it all depends on how much “hardness” was in the water to begin with. The softener “exchanges” about an equal amount of sodium for the initial hardness. The harder the water, the more sodium you'll have added to the final product.

Although this is actually a rather complicated math problem, it can be simplified to the following:

Grains per gallon (GPG) of total hardness x 1.89 = mg. of sodium (NA) in an 8 oz glass of water.

Even simpler:

GPG hardness x 2 = mg. of sodium in an 8 oz glass of water, more or less.

In other words, if your water test tells you that you have 18 grains per gallon hardness, installing a water softener will add about 35 milligrams of sodium to each 8 oz. glass of water you drink.

To put this in perspective, a tablespoon of catsup has 204 mg. of sodium and a slice of whole wheat bread has 211.

We should explain that what we are calculating is not the total sodium in your water, but the total amount added by the water softener. If your water already has 30 mg/L (milligrams per liter), you'll have to add that to what the softener puts in. An 8-oz glass is about 1/4 of a liter, so your total natural sodium for the 18-grain example above would be about 8 ppm. Add to that the amount added by the softener, and you'll have a general idea of the amount of sodium you'll be consuming from your drinking water.

FYI: Filters don't remove sodium from water, but reverse osmosis units do.

Note: If you're trying to make a more exact determination of the sodium added by a softener, here are some facts to help.

Ion exchange people usually express sodium as grains per gallon and as calcium carbonate ($CaCO_3$). This puts it in the same size frame so that you can compare it with the calcium/magnesium hardness in the water. To convert GPG sodium as $CaCO_3$ to GPG sodium as NA (sodium), multiply by 0.460 (the sodium conversion factor).