

Probably the number one question arising during a discussion of water softening is that of the "sodium" issue. It is greatly misunderstood due to all the bad press about too much salt (sodium) in the average American's diet today. Various studies contradict one another on the actual health-impact of sodium in the diet. We must have sodium to live...but how much is enough...how much is too much? We will not attempt to answer those questions. However, we can put the topic into perspective by showing where the sodium in one's life comes from daily.

The standard sodium ion exchange (softening) process uses sodium (salt) to exchange-out the hardness ions (calcium & magnesium). Therefore, when you remove the hardness ions, they are replaced with sodium ions. The amount of sodium produced in the softening process is quite small and should not present any health problems for a healthy person. As a matter of fact, the U.S. drinking water regulations have dropped sodium as a regulated component of water. However, if a person has a question about whether or not they should consume water softened by the sodium ion exchange process, they should consult with their own health professional.

The basic information below should put soft water sodium into perspective for you relative to sodium in foods. For example, if you drank 3 quarts of water that was 10 grains hard before softening you would only take-in 223 milligrams of sodium or about 4.3% of the average daily intake of sodium attributable to the water. This would be less than the amount of sodium contained in two slices of white bread.

**FOOD**                      **APPROXIMATE  
SODIUM CONTENT  
IN MILLIGRAMS**

**BREAKFAST**

1/2 cup canned tomato juice	270
1 egg (no salt added)	60
2 slices bacon	150
2 biscuits or toast	300
2 teaspoons margarine	100

**LUNCH**

Luncheon meat, corned beef or ham (3 oz.)	900
Processed cheddar cheese (1 oz.)	420
2 slices white bread	300
1 cup milk	120
1 large olive	130
1 dill pickle	930
1 teaspoon mustard	60
Potato chips, about 10	200

**DINNER**

Steak, 6 oz., no salt added	80
Green salad with 1 ounce French Dressing	450
Baked potato, salt added	240
Two pats margarine	100
Bread, 2 slices or equivalent	300

**TOTAL SODIUM.....5,110**  
(Milligrams)

TABLE 1 - Sodium Added to Water from Cation Exchange Softening		
Initial Water Hardness	Sodium added by Cation Exchange Softening of Water	
Grains per Gallon	Milligrams Na+/gal.	Milligrams Na+/qt.
1	30	7.5
5	149	37
6	179	44
7	209	52
8	239	60
9	269	68
10	298	75
15	447	112
20	596	150
30	894	225
40	1,191	300

TABLE 2 - Sodium Intake from Softened Water Compared to Total Sodium Intake				
Initial Water Hardness/ Grains per Gallons	Milligrams Na+ Per 3 qts. Softened Water	Milligrams Na+ from Food	Total Na+ Consumed Milligrams	% of Total from Softened Water
1	23	5,000	5,023	0.4%
5	112	5,000	5,112	2.2%
10	223	5,000	5,223	4.3%
15	335	5,000	5,335	6.5%
20	447	5,000	5,447	8.2%
30	670	5,000	5,670	12.5%
40	893	5,000	5,893	15.2%