

Public Health Fact Sheet
Sodium in Drinking Water

Sodium is a naturally occurring element commonly found at low levels in drinking water supplies. Occasionally sodium is found in groundwater supply wells at elevated levels from both natural and man made sources. This fact sheet describes the public health implications of elevated sodium in drinking water supplies.

Natural Sources of Sodium

Some sodium is always expected to be present in groundwater. Based on sampling done by the US Geological Survey, sodium levels in groundwater across most of Wisconsin are below 10 mg/L (milligrams per liter). There are areas in the northwest near Lake Superior where normal levels are above 40 mg/L. In the eastern part of the state near Lake Michigan there are several areas from Marinette to Kenosha where naturally occurring sodium levels are commonly above 40 to 60 mg/L.

Common Man-Made Sources of Sodium

Sodium is a primary chemical element found in table salt as well as salts used for removing ice from roadways during winter months. Road salt often dissolves in water and runs off into streams or infiltrates into the groundwater near roadways and uncovered salt storage areas. Sodium is also added to water supplies from water softeners as hardness chemicals are removed. Softened water generally has sodium levels between 40 and 1,200 mg/L. The amount of sodium added by a water softener increases with the hardness of the initial well water.

Public Health Implications

High levels of sodium in drinking water do not pose a health threat to most people. Sodium in drinking water is usually a small source of the sodium in a typical diet. The Food and Nutrition Board of the National Research Council recommends that most healthy adults need to consume at least 500 mg of sodium per day, and that sodium intake should be limited to no more than 2400 mg/day. A Food and Drug Administration publication states that most American adults eat between 4,000 and 6,000 mg of sodium per day.

However, for persons on a physician-prescribed low sodium or “no salt diet”, the US EPA, the American Heart Association, and the Wisconsin Department of Health Services recommend that sodium levels not exceed 20 mg/L in drinking water. If your water supply has greater than 20 mg/L and you are on a salt restricted diet, using bottled water for drinking and food preparation will address your exposure. Sodium does not evaporate from the water and is not absorbed through the skin in significant quantities. It is not necessary to find alternative sources of water for non consumptive uses of your water, such as washing and bathing.

For more information about sodium in drinking water, visit the web sites listed below or contact your local health department or the Wisconsin Department of Health Services at (608) 266-1120.

US EPA office of Drinking Water

<http://www.epa.gov/safewater/ccl/sodium.html>

Water Treatment and Purification

<http://www.wcp.net/>

