

Sodium in Drinking Water

What is Sodium?

Sodium can be present as sodium chloride (salt in groundwater due to natural salt deposits), industrial processes, sewage effluent, water softener backwash, and from winter road salt.

Effects of Sodium Concentrations:

The Ontario Drinking Water Standards states the Aesthetic Objective for sodium in drinking water is 200 milligrams per litre at which it can be detected by a salty taste. Sodium is not toxic. Consumption of sodium in excess of 10 grams per day by normal adults does not result in any apparent adverse health effects. In addition, the average intake of sodium from water is only a small fraction of that consumed in a normal diet. A maximum acceptable concentration of sodium in drinking water has, therefore, not been specified. The major source of sodium in our diet comes from table salt and processed foods.

Persons suffering from hypertension or congestive heart failure may require a sodium-restricted diet in which case the intake of sodium from drinking water may be significant. The local Medical Officer of Health should be notified when the sodium concentration exceeds 20 mg/L, so this information may be passed on to local physicians. Susceptible individuals should therefore know the sodium concentration in their drinking water.

Investigation and Testing:

The source of high sodium levels should be determined where possible. Backwashing a water softener too close to a well can contribute to elevated levels of sodium. There are natural sodium deposits in certain areas of Grey and Bruce counties. Sodium can be removed from drinking water by reverse osmosis or distillation. Another way of treating the problem is to drill a new well into a different aquifer.

Softening using a domestic water softener increases the sodium level in drinking water and may contribute to the daily sodium intake for a consumer on a sodium restricted diet. It is recommended that a separate unsoftened supply be used for cooking and drinking purposes.