SODIUM IN DRINKING WATER

THE TOWN OF ST. MARYS WATER SUPPLY

Sodium Background Information:

Sodium is a mineral that can be found in a variety of foods and drinking water supplies. Sodium (Na) is one of the chemical elements found in table salt (known as sodium chloride). Sodium is not considered a toxic element. The human body needs sodium in order to maintain blood pressure, control fluid levels and for normal nerve and muscle function. Sodium occurs naturally in all foods, and sodium levels vary considerably for different types of food. Food processing can add significant amounts of sodium.

Analysis of sodium testing conducted over the past 20 years in St. Marys, has shown no measureable increase. As such, no direct correlation can be made between road slat usage / well intrusion and our elevated sodium levels. Naturally occurring sodium is common in our geographical area.

The amount of sodium present in water supplied by the Town of St. Marys is not a health concern for the majority of people. A small percentage of the population may have been advised to follow severe sodium-restricted diets, such as patients with heart failure, kidney failure, or severe hypertension. Sodium levels in water may be something they need to consider.

Guidelines for Canadian Drinking Water Quality:

The Ontario Drinking Water Systems Regulation 170/03 under the Safe Drinking Water Act 2002 requires reporting to the local Medical Officer of Health when sodium levels in public drinking water supplies exceed 20 mg/L. At this point, the local Medical Officer of Health informs local physicians so that doctors may advise their patients accordingly, who are on sodium-restricted diets.

The aesthetic objective for sodium in drinking water is ≤200 mg/L. The taste of drinking water is generally considered offensive at sodium concentrations above the aesthetic objective. Therefore, our bodies provide a natural “built-in” restriction on the amount you will drink.

Average Daily Intake:

Most people consume more sodium than they need. While the average daily intake of sodium for healthy adults is about 3,100mg, this is well above the 2,300mg that is considered the maximum amount an adult should consume in a day.

At the highest observed sodium levels (83.9mg/L) drinking up to two litres of St. Marys water per day would contribute only 170mg of sodium to your diet. This is about 7% of a teaspoon of salt (1 tsp. of salt contains 2,350 mg of sodium) or 7% of the 2,300mg maximum. For healthy adults, children and seniors, this sodium level in drinking water does not pose a risk.

The main source of sodium in most diets comes from processed foods, such as snack foods, fast foods, processed meats, soups, crackers, and condiments.

Sodium content of some common foods and beverages (approximate levels):

Approximate Sodium Levels of some Common Foods and Beverages			
Item	Sodium Level	Item	Sodium Level
Table Salt (1 tsp.)	2350 mg	Baked Beans (1 cup)	790 mg
Bagel, Plain	379 mg	Cheese, Processed (1 slice)	250 mg
Breakfast Cereal (1 cup)	300 mg	Lunch Meats (1 oz.)	350 mg
Tomato Juice, Processed (1 cup)	691 mg	Bottled Water (varies)	36 mg

(Reference: Canada Nutrient File, 2005)

Use of Water Softeners:

When water is softened at home, it is done by passing the water through a bed of ion-exchange media that replaces hardness minerals (calcium and magnesium) with sodium chloride (salt) or potassium (sodium chloride being the most common). While this reduces the hardness of your water, it can possibly add significant amounts of sodium at your tap. It is recommended that a separate, un-softened supply be used for drinking and cooking purposes. Further, softened water should not be given to infants and not be used in preparing infant beverages, including formula and juice.

Removing Sodium in the Home:

Neither pitcher-type filtration units nor the boiling of water will remove sodium from the water. Some home owners, especially those sensitive to sodium, have chosen to use reverse osmosis or distillation devices to remove or reduce the sodium and other unwanted minerals from their water supply.

When purchasing a treatment device, look for one that has been certified by an organization accredited by the Standards Council of Canada (SCC). In addition, the treatment device should meet the NSF/ANSI Standard 62 on drinking water distillation systems or Standard 58 on reverse osmosis systems.

Always be wary of door-to-door sales people who try and sell you a water purification device. These people do not represent the town. If someone approaches you to do a free drinking water test, keep in mind that this could be a tactic to sell a very "over-priced" water purification device. While selling water treatment devices is not a crime, improper testing of drinking water can be. If you are interested in purchasing a water treatment device, many local, reputable companies can assist you.

Remember…

The level of sodium in the Town of St. Marys Water Supply is not a health risk for the vast majority of adults, children and seniors.

For more information on water quality, please contact the Town of St. Marys Environmental Coordinator at 519-284-2340 ext. 209. Additionally, you can contact the Perth District Health Units Health Line at 519-271-7600 ext. 267 or toll free at 1-888-271-7348 ext. 267 for any health-related issues.

Information Sources:
Dietary Reference Intakes from Water, Potassium, Sodium, Chloride and Sulfate, The National Academies, 2004.
Canadian Nutrient File, Health Canada, 2005., Health Canada, Canadian Water Quality Association, U.S.E.P.A.