

Drinking Water and Sodium

Sodium is a mineral that can be found in drinking water supplies. Sodium (Na) is one of the chemical elements found in table salts (known as sodium chloride). Naturally occurring sodium is common in the Huron and Perth County geographical area.

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 most foods. Natural levels vary considerably for different types of food, and food processing can significantly increase sodium levels.

Sodium in drinking water is not a health concern for most people but may be an issue for someone with severe hypertension, congestive heart failure or on a sodium-restricted diet.

Measuring the Sodium in Drinking Water

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 20mg/L. At this point, the local Medical Officer of Health informs local physicians, as such information is intended to help persons on sodium-restricted diets control their sodium intake.

The aesthetic objective for sodium in drinking water is $\leq 200\text{mg/L}$. The taste of drinking water is generally considered offensive at sodium concentrations above the aesthetic objective.

Average Daily Intake

Most people consume more sodium than they need. The average adult consumes about 3,100mg per day, which is well above the 2,300mg that is considered the maximum amount an adult should consume in a day.

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

For example, some common everyday foods also contain sodium:

- 250ml (1cup) 1% milk: 161mg of sodium (7% of daily allotment)
- 1 slice (35g) whole wheat bread: 184mg of sodium (8%)
- 1 plain bagel with plain cream cheese: 629mg of sodium (27%)
- 125ml (1/2 cup) All Bran cereal: 305mg of sodium (15%)
- 1 slice of pepperoni pizza: 780mg of sodium (34%)

It is also important to note that most bottled waters also contain sodium – check the Nutrition label to find out the amount.

Sodium- Restricted Diets

A small percentage of the population may have been advised to follow severely sodium-restricted diets, such as patients with heart failure, kidney failure and severe hypertension.

Sodium levels in water may be something they need to consider.

If the sodium concentration in your drinking water is 20mg/L then drinking up to two litres of water per day would contribute only 40mg of sodium to your diet. For healthy adults, this sodium level in drinking water does not pose a risk. Even for individuals on very strict sodium-restricted diets of 500mg of sodium per day, two litres of water would only account for 8% of their daily allotment of sodium.

Drinking Water at Home

Water softeners may increase the levels of sodium in drinking water. Most water softening devices use ionic exchange to replace calcium with sodium. While this reduces the hardness in your water, it can add significant amounts of sodium at your tap.

It is recommended that water from the water softener not be given to infants and not to be used in the preparation of infant beverages, including formula and juice. It is recommended to have a separate water line for drinking and cooking, which bypasses the water softener.

If you have concern about high sodium levels in your drinking water, the most effective way to reduce sodium intake is to:

- Reduce the use of salt in all cooking and baking;
- Not use the salt shaker at the table
- Use as few convenience foods as possible (such as canned goods and frozen entrées);
- Avoid salty snack foods, fast foods, take-out meals and deli meats;
- Use sodium-reduced products as much as possible (while understanding that sodium-reduced doesn't always mean low sodium).

Be sure to check Nutrition Label on food and beverages to calculate your sodium intake.

For more information

- Call Health Line at 1-888-221-2133
- Visit www.hp-ph.ca