



Sodium in Drinking Water

Due to its high solubility, sodium is naturally found in groundwater. Sodium concentrations in ground waters normally range between six and 130 mg/L (Bond, R.G. and Struab, C.P., 1973). Most water supplies contain less than 20 mg of sodium per litre (WHO, 1996). In southwestern Ontario, levels of sodium in drinking water may be higher due to the area's underground salt deposits (Health Canada, 1992). However, in addition to hydrological and geological conditions, human activities can also contribute to sodium levels in water.

An estimated 25 to 50 percent of salt used on roads for snow and ice control enters ground water and can elevate levels of sodium in public water supplies (McConnell, H.H. and Lewis, J., 1972). Domestic water softeners can produce levels over 300mg/L (WHO, 1979). Other factors influencing sodium levels in water include agricultural run-off, sewage and industrial effluents, sodium compounds in corrosion control and water treatment chemicals such as sodium fluoride, sodium bicarbonate and sodium hypochlorite.

Sodium and Your Health

Sodium is not considered toxic and is naturally found in all living organisms. In fact, sodium is essential to our diet. This mineral helps regulate fluid levels in our bodies. According to the World Health Organization, "It has been estimated that the total daily sodium intake of 120-400 mg will meet the daily needs of growing infants and young children up to one-year, and 1500 mg for most adults" (WHO, 1996). Sodium from drinking water contributes to only a small fraction of that consumed in a normal diet. According to the Canadian



Community Health Survey in 2004, 77% of Ontarian's daily sodium intake comes from processed foods. Examples of some foods with high sodium content are listed below.

Sodium-Restricted Diets

Unfortunately, people suffering from hypertension or congestive heart failure or those on a sodium-restricted diet must take certain precautions to regulate their sodium intake. Consulting your

physician and/or a registered dietitian for planning of food choices is only one step to regulating your sodium diet. Precautionary steps should also include awareness of sodium levels in drinking water.

Regulating Sodium in Our Drinking Water

In Ontario, sodium is required to be sampled in municipally treated drinking water every five years. In addition, all

Approximate Sodium Content of Foods

Food Item	mg of sodium per serving	Food Item	mg of sodium per serving
Processed cheese	406 mg	Stuffing mix	1131 mg
Canned ham	1114 mg	Green olives	323 mg
Corned beef	802 mg	Dill pickle	928 mg
Sauerkraut	1554 mg	Fast food hamburger	461 mg
Tomato juice	878 mg	Canned chicken noodle soup	1107 mg
Wheaties	355 mg	Soy sauce	1029 mg
Canned beef stew	980 mg	Table salt	1938 mg

sodium levels in excess of 20 mg/L must be reported to the Medical Officer of Health. The Haldimand-Norfolk Health Unit periodically notifies local physicians of elevated sodium levels in our municipal drinking water in order for them to advise their patients with sodium-restricted diets accordingly.

For those on private wells, water samples can be submitted to private labs for sodium level testing at a fee. Visit the link below to find an accredited lab near you:

www.ene.gov.on.ca/en/water/sdwa/licensedlabs.php

Tests for sodium are also usually done by water conditioning companies listed in the Yellow Pages.

Treatment of Sodium in Drinking Water

Sodium will NOT be removed by boiling water or using pitcher-type filtration units. Reverse osmosis or distillation devices can remove sodium and other unwanted minerals from drinking water. However, consumers should check to ensure that the treatment device they purchase is certified by an organization accredited by the Standards Council of Canada (SCC). The treatment device should meet the NSF/ANSI Standard 58 on reverse osmosis drinking water systems or Standard 62 on drinking water distillation systems.



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