

USI ensures adequate iodine intake in Canada

Statistics Canada, Nov.29, 2012. Data from the Canadian Health Measures Survey. <http://www.statcan.gc.ca/pub/82-625-x/2012001/article/11733-eng.htm>

In 2009-2011, the median urinary iodine concentration in Canadians was 134 µg/L, indicating optimal national iodine nutrition.

Iodine deficiency was prevalent in most of central and western Canada until the 1920s, when efforts to eliminate endemic goiter with the use of iodized salt were introduced. Iodine deficiency can lead to goiter, stunted physical and intellectual development, stillbirths, and spontaneous abortions - these have been virtually eliminated in Canada through salt iodization.



Optimal iodine nutrition allows Canadian children to learn well at school

In contrast to the U.S., where both iodized and non-iodized salt are available, all table salt in Canada is iodized with 100 ppm potassium iodide, which corresponds to approximately 77 µg iodine per gram of salt (1). Iodization of table salt was made mandatory by law in Canada in 1949. Specialty salts are exempt, but their sales are such a small fraction of the market that iodized salt consumption is thought to be close to 100%. Iodine is also obtained from other foods in the Canadian diet, including seafood, milk and grain products.

The Canadian Health Measures Survey (CHMS) measured the iodine concentration in spot urine samples on a nationally representative population sample in 2009-2011.

Based on results from the CHMS, the median iodine concentration of Canadians in 2009 to 2011 was 134 µg/L (*Table 1*), which is within the range of adequate intake recommended by the WHO. The median iodine concentration in urine was higher in children: 215 µg/L for 3 to 5 year olds and 189 µg/L for 6 to 11 year olds.

Table 1: Median urinary iodine concentration (UIC), by age group, household population aged 3 to 79, Canada, 2009 to 2011

Age (years)	Median UIC (µg/L)
Total	134
3 to 5	215
6 to 11	189
12 to 19	163
20 to 39	124
40 to 59	122
60 to 79	125

Urinary iodine levels suggesting low iodine intakes were found in 22% of Canadians aged 3 to 79 (*Table 2*). Recent U.S. surveys have shown an increasing prevalence of low iodine levels (2). This increase in low iodine levels has been attributed to a change in food production and consumption, such as a reduction of salt in the diet, the increasing popularity of non-iodized salt like sea salt, the reduction of iodine supplementation in commercial dairy products and the replacement of iodine with bromine salts as dough conditioner in breads (3,4).

Table 2: Percentage of the population with low and high urine iodine levels, by age group, household population aged 3 to 79, Canada, 2009 to 2011, percent (%)

Age (years)	UIC <100 µg/L (at risk for low iodine intake)	UIC >300µg/L (at risk for excess iodine intake)
Total	22	15
3 to 5	9	39
6 to 11	13	29
12 to 19	16	21
20 to 39	21	14
40 to 59	25	12
60 to 79	26	12

References

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