

New Health Canada biomonitoring data demonstrate Low exposure of Canadians to chemicals

On 16.8. 2010 Health Canada, the Canadian authority for consumer health, released their biomonitoring data collected in 2007-2009 as part of the Canadian Health Measures Survey. The findings demonstrate that the levels of manmade compounds found in Canadians are quite low. The Canadian program is modeled after a similar program called the National Health and Nutrition Examination Survey (NHANES) that is operated by the US Center for Disease Control (CDC); the CDC-NHANES studies were based on samples from 2005-2006. Although the two sets of biomonitoring data are not directly comparable (different group, different timeframe, samples analysed in a different lab), it is noticeable that overall, the levels found in the Canadian data are somewhat lower than reported from the US-CDC program.

Biomonitoring data must be put into proper scientific context

With respect to the relevance of such biomonitoring data, Jasmin Bird of the Polycarbonate/Bisphenol A group said: "While the Health Canada report provides another layer of information to help scientists and government regulators make reliable decisions about protecting the environment and about the safety of products, it is important that biomonitoring data are placed in the proper scientific context. It is premature to base policy and regulatory actions solely on the fact that a substance has been detected in the human body, without fully understanding the possible health impacts of biomonitoring data."

Consumers should be aware of the following information:

- Biomonitoring provides only a snapshot of substances present in the body at a single point in time. The presence of a substance detected by biomonitoring is not, on its own, an indicator of whether there will be any health effects, according to the United States' Centers for Disease Control and Prevention.
- As the new Canadian report states: "The ability to measure environmental chemicals at very low levels continues to progress. However, the presence of a chemical in a person's body does not necessarily mean that it will affect a person's health."

Measured BPA exposure levels 1000-2000 times below safe intake level

One of the substances analysed in the samples was Bisphenol A (BPA). The Canadian program measured BPA in urine from more than 5,400 people of ages 6-79 years. Consistent with other biomonitoring data, the Canadian data detected trace levels of BPA in most of the samples, levels measured being generally very low. Highest exposures were recorded in the younger age groups, although differences between the age groups studied is modest. Overall, the data indicate that exposure to BPA is approximately 1,000 times below the safe intake level set by Health Canada Canada for all age groups, including children and teenagers (provisional Tolerable Daily Intake set at 25 micrograms/kg bodyweight/day). These findings are consistent with the earlier CDC-dataset. Both authorities in the US and Canada are planning additional cycles of data collection for future years.

Regarding Health Canada's data release specific to bisphenol A (BPA), Jasmin Bird of the Polycarbonate/BPA Global Group said: "The data about consumer exposure to BPA in Canada confirms that people are exposed to only minute levels that are readily eliminated from the body. The typical levels of BPA found in the general Canadian population are extremely low – even 2000 times below the European TDI of 50 microgram/kg bw/d as defined by the European Food Safety Authority."

- As noted by the Canadian government as a conclusion to their screening risk assessment on BPA, "In general, most Canadians are exposed to very low levels of BPA, therefore, it does not pose a health risk."
- In regard to low levels of exposure to BPA from food packaging, Health Canada's Food Directorate, based on its own data, recently concluded that, "The current dietary exposure to BPA through food packaging is not expected to pose a health risk to the general population, including newborns and infants."
- Scientific research shows that in humans, BPA is quickly eliminated from the body through urine, in the form of a biologically inactive metabolite, the substance actually measured in the Canadian biomonitoring study. If miniscule amounts of BPA are ingested through the diet, they are efficiently metabolized in the intestines and liver and do not accumulate in the body.

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Documentation of further links summarized below.

Statistics Canada:

- Short summary on lead, mercury and BPA (<http://www.statcan.gc.ca/daily-quotidien/100816/dq100816a-eng.htm>)
- Fact sheet on BPA data (<http://www.statcan.gc.ca/pub/82-625-x/2010002/article/11327-eng.htm>)
- Health Reports article (<http://www.statcan.gc.ca/pub/82-003-x/2010003/article/11324-eng.htm>)
- Data tables report (<http://www.statcan.gc.ca/pub/82-623-x/82-623-x2010002-eng.pdf>)

Health Canada

- News release (http://www.hc-sc.gc.ca/ahc-asc/media/nr-cp/2010/2010_139-eng.php)
- Short summaries of biomonitoring and the current program (<http://www.hc-sc.gc.ca/ewh-semt/contaminants/human-humaine/index-eng.php> and <http://www.hc-sc.gc.ca/ewh-semt/contaminants/human-humaine/glance-resume-eng.php>)
- Overview of “Report on Human Biomonitoring of Environmental Chemicals in Canada” (<http://www.hc-sc.gc.ca/ewh-semt/pubs/contaminants/chms-ecms/overview-vue-eng.php>)
- Full report with data on all chemicals included in program (<http://www.hc-sc.gc.ca/ewh-semt/pubs/contaminants/chms-ecms/index-eng.php>)
- Summary of overall results and government actions (http://www.hc-sc.gc.ca/ewh-semt/contaminants/human-humaine/chms-ecms_bio-eng.php)
- Biomonitoring program Q&As (http://www.hc-sc.gc.ca/ewh-semt/contaminants/human-humaine/chms-ecms_faq-eng.php)