

## Renal stones and/or unexplained acute renal failure in infants

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Over the past year, an outbreak of renal stones and/or acute renal failure in association with the consumption of melamine-contaminated powdered infant formula has occurred in very young children in China. Other dairy products made in China and exported to other countries, including Canada, have been found to also contain melamine and were recalled from the market. Infant formula manufactured in China is not approved for sale in Canada. Health Canada has confirmed with the four major manufacturers of infant formula sold in Canada that they do not use any milk ingredients that come from China. In light of international travel, adoption and immigration, and the presence of melamine-contaminated dairy products, the question of Canadian infants being affected required a rapid response.

The Public Health Agency of Canada (PHAC) undertook to determine if there were cases of renal illness in Canadian children that may have been caused by the milk formula contamination in China. PHAC made a request to the CPSP to conduct a one-time emergency survey on the issue. The CPSP initiated the survey adapted from, and in collaboration with, the New Zealand Paediatric Surveillance Unit within 10 days of the PHAC request. Results were available three weeks after the survey was initiated.

There were 1,153 survey respondents, among the 2,475 CPSP participants surveyed (42%). In the past 12 months, slightly less than 10% of paediatricians reported that parents had consulted them about possible milk-product contamination. A total of eight paediatricians have reported 12 cases of infants (less than one year of age) with renal stones and/or unexplained acute renal failure. There were no cases of melamine-associated renal diseases. Other associated factors included urinary tract infections, hydronephrosis, diuretic therapy, hyperparathyroidism and prematurity. Hypercalciuria was present in seven cases and hyperoxaluria in one case.

The melamine example has demonstrated the potential for PHAC and the Canadian Paediatric Society to work together through the CPSP to carry out national emergency surveillance of rare conditions quickly and inexpensively, in order to inform public health responses to disease management and prevention.

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