

### **Canadian kids don't get enough Vitamin D**

*SickKids study finds one third of urban Canadian toddlers have deficiency*

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TORONTO – Vitamin D deficiency may be more common among urban toddlers than was previously thought, scientists at The Hospital for Sick Children (SickKids) have found.

In the first Canadian study of the prevalence of Vitamin D deficiency in urban Canadian toddlers, SickKids researchers discovered that one third of the toddlers had less than the recommended levels of Vitamin D. This finding is markedly higher than the data from a previous study of toddlers in Boston that found 14 per cent of that population was lacking Vitamin D. The new research will be presented at the annual meeting of Pediatric Academic Societies (PAS) in Baltimore on May 4.

As a result of Vitamin D deficiency, urban Canadian toddlers may be at a higher risk for certain medical problems, including rickets (a disease that may cause severe bone deformities and seizures), Type 1 diabetes, multiple sclerosis and certain types of cancers, according to the study's lead author, Dr. Jonathon Maguire. "Vitamin D deficiency is associated with a number of chronic medical conditions," says Maguire, an Academic Fellow in the SickKids Division of Paediatric Medicine who is pursuing a Master's degree in Clinical Epidemiology at the University of Toronto. "It is concerning that two-year-old urban Canadian children may be at particular risk of Vitamin D levels below the recommendations of the American Academy of Pediatrics and the Canadian Paediatric Society."

Between November 2007 and June 2008, researcher team evaluated 92 healthy children aged 24 to 30 months who were attending routine well-child visits at a community-based paediatric practice in Toronto. The scientists aimed to determine the prevalence and potential predictors of Vitamin D deficiency in this population by concurrently measuring dietary exposures by questionnaire and 25-OH Vitamin D by blood test.

The study revealed that factors associated with lower levels of Vitamin D included lower milk intake, higher Body Mass Index (BMI) and watching television while snacking.

“The findings of our study underscore the importance of studying children's health and nutrition from a community or population perspective,” says Dr. Patricia Parkin, the study's principal investigator. “It also emphasizes the importance of creating community-based research networks such as *TARGet Kids!* (Toronto Area Research Group), an initiative that has been in development for the past year. This collaboration brings together child health researchers from several hospital departments who are committed to reaching out to study children's health beyond the walls of the hospital,” adds Parkin, a SickKids Senior Associate Scientist, Research and Fellowship Director in the Division of Paediatric Medicine and Pediatric Outcomes Research Team (PORT) at SickKids and Associate Professor of Paediatrics, Health Policy, Management and Evaluation at the University of Toronto.

Maguire says this study is an important step in a much-needed field of Canadian research. “Efforts to understand the implications of these findings, identify children at the highest risk and develop interventions to improve the Vitamin D status of young children in Canada are urgently needed,” he says. In the meantime, Maguire recommends that parents consult their child’s physician for advice on the use of Vitamin D supplements and other preventative strategies.

“As we expand our knowledge of the prevalence, consequences and risks of common conditions, we hope this will contribute to the development of preventative interventions,” says Parkin.

The study was supported by the Danone Institute, SickKids Foundation and the SickKids Research Institute Trainee Startup Fund.

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*The Hospital for Sick Children (SickKids), affiliated with the University of Toronto, is Canada’s most research-intensive hospital and the largest centre dedicated to improving children’s health in the country. As innovators in child health, SickKids improves the health of children by integrating care, research and teaching. Our mission is to provide the best in complex and specialized care by creating scientific and clinical advancements, sharing our knowledge and expertise and championing the development of an accessible, comprehensive and sustainable child health system. For more information, please visit [www.sickkids.ca](http://www.sickkids.ca). SickKids is committed to healthier children for a better world.*