

Reducing the Risk of Childhood Obesity Through Breastfeeding

The World Health Organization (WHO) estimates that globally over one billion adults are overweight and at least 300 million of those individuals are clinically obeseⁱ. In Canada, the increasing prevalence of obesity has been called *the fastest growing epidemic of our time*.ⁱⁱ The risks of obesity have been clearly demonstrated and the rise of obesity in Canadian population groups has been documented in various reports. But what is very concerning is that among Canadian children, the prevalence of overweight and obesity is rising rapidly.ⁱⁱⁱ One study indicates that from 1981-1996, the prevalence of obesity among Canadian children (aged 7-13 years) tripled.^{iv}

Obese children face greater health risks than children with healthy body weights: in a population-based sample, approximately 60% of obese children five to 10 years of age had at least one other risk factor for cardiovascular disease on top of obesity.^v While this fact is very alarming, there is good news: many of the complex individual, social, cultural, economic and environmental factors fuelling this epidemic can be changed or managed. For example, there is growing research evidence that the primary prevention of obesity starts during infancy, and research suggests that the way babies are fed during their first year may influence the risk for obesity. A meta-analysis related to the duration of breastfeeding and risk of overweight indicates that breastfeeding is associated with a decreased risk of overweight.^{vi}

<http://aje.oxfordjournals.org/cgi/reprint/162/5/397>

There are several predetermining factors affecting the risk of becoming overweight: metabolic susceptibility, insulin resistance, appetite control and satiety^{vii} and there is growing evidence that these factors are established in the first year of life. Breastfeeding and the species-specific nature of human breastmilk mediate the risk for obesity through their impact on these predetermining factors.

In 2006, the WHO released new growth standards for infants and young children show that there are significant differences in growth patterns between breastfed and formula-fed infants. A large study, the WHO Multicentre Growth Reference Study^{viii}, www.who.int/childgrowth/standards/Breastfeeding.pdf found that breastfed infants regulate their energy intake at a lower level than formula-fed infants. Breastfed infants have a slower growth curve in the first year. These infants have similar growth patterns to formula fed counterparts during their first 6 months but they have a lower weight-to-length ratio and skin fold thicknesses, thereafter. Investigators have concluded that, had a breastfed based growth standard been developed and distributed earlier, the current obesity epidemic prevalent in many developed countries would have been detected and addressed sooner.

But it isn't enough that governments promote the initiation of breastfeeding for the public. Research finds that the duration of breastfeeding is inversely related to pediatric overweight. This means that the greater the duration of breastfeeding, the lower the odds of overweight. It has been shown that for each month of breastfeeding up to age 9 months, the odds of overweight decreased by 4%. This decline resulted in more than a 30% decrease in the odds of overweight for a child breastfed for 9 months, when compared with a child who was never breastfed.

The link between breastfeeding and the reduction of risks for obesity has been acknowledged by numerous organizations and are referred to in position papers, such as the recently revised Ontario Public Health Association Breastfeeding Position Paper.

www.opha.on.ca/ppres/2007-03_pp.pdf Breastfeeding was also identified as a special recommendation in the Registered Nurses Association's Best Practice Guidelines for Prevention of Childhood Obesity www.rnao.org In its second expert report the American Institute for Cancer research released recommendations for cancer prevention with exclusive breastfeeding as one of two special population recommendations.
http://www.aicr.org/site/PageServer?pagename=dc_home_guides

There is only one research-based global strategy which contributes to an increase in sustained breastfeeding rates. This strategy is the Baby Friendly Initiative, developed by the World Health Organization to address the falling rates of breastfeeding worldwide. The Baby Friendly Initiative is a multi-pronged strategy which addresses the training health care providers receive to assist mothers, and provides evidence-based best practice standards and policies which increase breastfeeding initiation and duration rates. The strategy also protects breastfeeding by providing guidelines for the distribution and marketing of breastmilk substitutes, thus limiting the negative affects of formula advertising, through adoption of the International Code of Marketing of Breast Milk Substitutes (WHO Code)

The Ontario government is already using many tools to work towards the elimination of childhood obesity. Since research findings indicate that breastfeeding plays a role in the reduction of obesity, we must incorporate the principles and practices of the Baby Friendly Initiative into public policy and health related legislation as one facet of a most proactive and comprehensive approach to achieving healthy weights for the people of Ontario.

ⁱ World Health Organization. Global Strategy on Diet, Physical Activity and Health. Obesity and Overweight Facts. Available at <http://www.who.int/dietphysicalactivity/publications/facts/obesity/en/>

ⁱⁱ DiRuggiero E, Frank J, Moloughney B. Strengthen Canada's public health system now. Canadian Journal of Public Health. 2004;95(1):5,11.

ⁱⁱⁱ Tremblay MS, Willms JD. Secular trends in the body mass index of Canadian Children. Canadian Medical Association Journal (CMAJ).2000;163(11):1429-1433. Correction in CMAJ.2001;164(7):970; Willms, Tremblay, & Katzmarzyk, Geographic and Demographic Variation in the Prevalence of Overweight Canadian Children, Obesity Research, Vol 11, No 5, May 2003

^{iv} Tremblay MS, Willms JD. Secular trends in the body mass index of Canadian Children. Canadian Medical Association Journal (CMAJ).2000;163(11):1429-1433.

^v Institute of Medicine. Preventing Childhood Obesity: Health in the Balance, National Academy of Sciences.2004.

^{vi} Harder T, Bergmann R, Kallischnigg G, Plagemann A. Duration of breastfeeding and risk of overweight: a meta-analysis. *Am J Epidemiol* 2005; 162:397-403.

^{vii} Government of Ontario. Chief Medical Officer of Health Report: Healthy Weights, Healthy Lives, 2004, page 33.

^{viii} WHO. (2006a). *A Growth Curve for the 21st Century. The WHO Multicentre Growth Reference Study. Nutrition for Health and Development*. WHO. Geneva. Switzerland. Presented

by Dr. K Dewey PhD Steering Committee WHO Multicenter Growth Reference Study April 20
2006 Ottawa, ON.

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