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SUBMISSION

To the Health Committee

Inquiry into Obesity and Type Two Diabetes in New Zealand

Introduction

1. This submission is from the Infant Feeding Association of New Zealand (IFANZ).
2. Marcia Annandale, Trustee and Coordinator and IBFAN Asia Pacific Regional Representative, wishes to appear before the Committee to speak to our submission. She can be contacted at (03) 323 7124.
3. IFANZ is a newly formed Trust affiliated to the International Baby Food Action Network (IBFAN) with the following seven guiding principles:
 - The right of infants everywhere to have the highest level of health.
 - The right of families, and in particular women and children, to have enough nutritious food.
 - The right of women to breastfeed and to make informed choices about infant feeding.
 - The right of women to full support for successful breastfeeding and for sound infant feeding practices.
 - The right of all people to health services which meet basic needs.
 - The right of health workers and consumers to health care systems which are free of commercial pressures.
 - The right of people to organise in international solidarity to secure changes which protect and promote basic health.

General

4. We welcome the inquiry into obesity and type 2 diabetes and thank the Committee for the opportunity to make a submission. Internationally there has been a lot of work on how to manage and prevent obesity. We draw from the wealth of knowledge through our affiliation with IBFAN and we submit that to protect, promote and support breastfeeding is the single most cost effective intervention to deal with obesity.

Terms of reference 1 - To examine the causative factors likely to be driving increases in obesity and type 2 diabetes, including nutrition and physical activity.

5. The low exclusive breastfeeding rates to six months in New Zealand and the minimal continuation through to two years of age or beyond as recommended by the World Health Organisation (WHO) are two major reasons for the increase in obesity and related chronic conditions. Please see the attached IBFAN information sheet on *Breastfeeding, Childhood Obesity and the Prevention of Chronic Diseases*.
6. In New Zealand there are several specific conditions which contribute to sub-optimal breastfeeding rates:
 - The lack of legislation and implementation of the International Code of Marketing of Breastmilk Substitutes and subsequent relevant World Health Assembly Resolutions.
 - The conflict of interest that arises due to the commercial relationship The Royal New Zealand Plunket Society has with infant formula and complementary baby food manufacturer, Heinz Wattie's.
 - The Ministry of Health not embracing the global public health recommendation of exclusive breastfeeding to six months of age.
 - The lack of consistent breastfeeding information and support from health care providers.

Terms of reference 3 - To inquire into the effectiveness, particularly for children, of current obesity prevention approaches and interventions including primary prevention and screening, information provision, education, physical activity and voluntary steps taken by the food industry.

7. The Ministry of Health, *Infant Feeding: Guidelines for New Zealand Health Workers* (1997) and the New Zealand Infant Formula Marketers' Association, *Code of Practice for the Marketing of Infant Formula* (1997) are poorly written,

poorly utilized and poorly understood. The latter relies on voluntary self-regulation and this has proven ineffective.

8. Obesity reduction is dependent on robust exclusive breastfeeding yet in New Zealand the rate of exclusive breastfeeding at six months of age is 11% (Plunket data 2005).

Terms of reference 4 -To inquire into whether additional interventions aimed at changing features of the environment that promote obesity are required.

9. The Ministry of Health, *Review of the New Zealand Interpretation of the World Health Organization's International Code of Marketing of Breast-milk Substitutes*, 2004, includes eleven action points. The actions, even if taken, still fall short of the minimum standard set by the International Code.

Terms of reference 5 - To consider what policy or legislative mechanisms, if any, should be used to give effect to any findings of the inquiry.

10. We strongly recommend that New Zealand implements the International Code of Marketing of Breastmilk Substitutes and subsequent relevant World Health Assembly Resolutions, through law, decree or other legally enforceable measure.

Conclusion

11. The Infant Feeding Association of New Zealand concludes from international evidence, in keeping with the USA Centre for Disease Control and Prevention (CDC) that decreased television viewing, and more fundamentally increased breastfeeding initiation and duration, are two of the most cost effective interventions that can immediately address and prevent childhood obesity.
12. The Infant Feeding Association of New Zealand supports the full implementation of the International Code of Marketing of Breastmilk Substitutes and subsequent relevant World Health Assembly Resolutions.

IBFAN

BREASTFEEDING-BRIEFS N° 38

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Breastfeeding, Childhood Obesity and the Prevention of Chronic Diseases

After carefully reviewing the scientific evidence, the USA Centre for Disease Control and Prevention (CDC) concluded that there are only two potential, cost-effective interventions that can be put into place immediately to deal with the childhood obesity ([ref 1](#)) epidemic: decreased television viewing and breastfeeding promotion ([ref 2](#)). The purpose of this editorial is to summarize the evidence linking breastfeeding with the prevention of childhood and adolescent obesity, but first, it is important to say a few words about the relevance of breastfeeding promotion for the area of chronic diseases in general.

Obesity has become a global pandemic and is a major risk factor for hypertension, heart disease, type 2 diabetes, and several types of cancer. Thus, this condition is decimating the health care budgets of countries worldwide. In the USA, the direct and indirect costs of obesity are estimated to be over US\$100 billion per year as a result of direct medical expenditures and lost productivity caused by chronic diseases. In Brazil, the prevalence of overweight in children increased from 4.1% to 13.9% ([ref 3](#)). If breastfeeding can really make a difference, the recent longer duration (median around 10 months) found in Brazil ([ref 4](#)) might represent hope for a lower incidence of obesity. The reason why it is crucial for obesity prevention interventions to start early on in life is that once a child becomes obese, it is quite likely that s/he will remain obese as an adult.

Thus, breastfeeding represents a potentially ideal window of opportunity for obesity prevention. Dewey ([ref 5](#)) has recently reviewed the literature on this topic and concluded that breastfeeding is likely to be associated with a reduction in the risk of child obesity to a moderate extent. Dewey reviewed eleven observational studies with adequate sample sizes and with children's obesity data beyond 3 years of age. Only one of the studies was longitudinal and all were

conducted in industrialized nations in North America, Europe, Australia and New Zealand. Of these eleven studies, eight showed an inverse relationship between breastfeeding and child obesity after controlling for potential confounders. The three studies where such an association was not documented lacked data as to the exclusivity of breastfeeding. Since Dewey's review was published, two additional studies have been printed with somewhat contradictory results ([ref 6](#), [ref 7](#)), but here again both studies lack a clear definition of what is considered to be exclusive breastfeeding. These two studies highlight the need for doing more research in developing country populations and among ethnic minorities in developed countries. Although much work remains to be done in this area, particularly in regard to the need for well-designed, longitudinal studies that allow for a clear description of different breastfeeding modalities, the preponderance of the epidemiological evidence strongly suggests a link between breastfeeding and the prevention of obesity in the childhood and adolescent period.

However, because association does not prove causation, it is important to discuss the biological plausibility of these findings. First, individuals who were breastfed have a leptin profile that may favour adequate appetite regulation and less fat deposition. With regards to appetite regulation, Pérez-Escamilla et al. ([ref 8](#)) showed that Honduran babies adjusted their milk intake volume in an inverse proportion to the energy density of their mother's breastmilk. It has also been proposed that the reason that the milk fat content toward the end of the feeding episode (i.e. "hind milk") is higher than at the start of the episode ("fore milk") is that it signals the baby that the feeding episode is coming to an end. Obviously, formula-fed babies are not exposed to such "physiological signalling" as the fat concentration in formula remains constant throughout the feeding episode. A corollary of this is that among formula-fed babies it is the caretaker and not the infant who controls the child's caloric intake. Second, breastfed babies gain less weight than formula-fed infants during the first year of life. Third, formula-fed babies have higher insulin levels circulating in their blood stream, as a result of the higher protein content in infant formula, which in turn may stimulate a higher deposition of fat stores. Fourth, it is possible that breastmilk influences the development of a taste receptors profile that can foster a preference for lower energy diets later on in life.

We are still far from having conclusive evidence regarding the biological mechanism(s) that may explain a link between breastfeeding and the prevention of obesity. However, the high biological plausibility for this link coupled with the preponderance of the epidemiological evidence gives us a lot of room for optimism that putting resources into breastfeeding promotion indeed represents a major investment in the prevention of serious and costly chronic diseases later on in life. Considering all these arguments, it is important to support implementation of a strong WHO Global Strategy on Diet, Physical Activity and Health which puts public health rather than profits in the centre-stage.

References

1. Because of the psychosocial implications for children, some researchers in the USA use the term “overweight” instead of “obesity” when referring to children. For the purpose of consistency and clarity, the term obesity is used throughout this editorial. Usually, overweight and obesity are defined based on the BMI (Body Mass Index), calculated by dividing weight in kilogrammes by the square of height in metres. There is overweight when the BMI is between 25 and 29.9, obesity when it is 30 and over.
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5. Dewey KG. Is breastfeeding protective against child obesity? *J Hum Lact*. 2003;19:9-18.
6. Grummer-Strawn LM, Mei Z. Does breastfeeding protect against pediatric overweight? Analysis of longitudinal data from the Centres for Disease Control and Prevention Paediatric Nutrition Surveillance System. *Pediatrics*. 2004;113:e81-6.
7. Victora CG, Barros FC, Lima RC, Horta BL, Wells J. Anthropometry and body composition of 18-year-old men according to duration of breastfeeding: a birth cohort study from Brazil. *BMJ* 2003;327:901-4.
8. Perez-Escamilla R, Cohen RJ, Brown KH, Rivera LL, Canahuati J, Dewey KG. Maternal anthropometrical status and lactation performance in a low-income Honduran population: evidence for the role of infants. *Am J Clin Nutr*. 1995 61:528-34.