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INVESTING IN AUSTRALIA'S HEALTH
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Committee Secretariat
Standing Committee on Health and Ageing
PO Box 6021
Parliament House
CANBERRA ACT 2600

Dear Secretary

NHMRC submission to the Standing Committee on Health and Ageing *Inquiry into the health benefits of breastfeeding*

Thank you for your letter of 15 December 2006 inviting a submission to the *Inquiry into the health benefits of breastfeeding* (the Inquiry).

The National Health and Medical Research Council (NHMRC) has funded research surrounding the short and long term health and financial benefits of breastfeeding for many years. The research results show overwhelmingly that, in the interests of a healthy Australian population, breastfeeding should be actively promoted and encouraged.

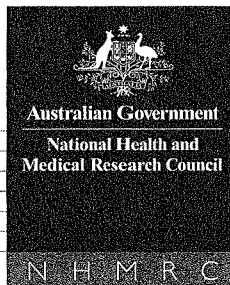
The NHMRC acknowledges the importance of promoting breastfeeding and has produced Guidelines and information pamphlets to assist Health Workers and Australian mothers.

In support of this submission I am enclosing a copy of the *Dietary Guidelines for Children and Adolescents in Australia* (2003) for the Committee's reference. The Guidelines can also be accessed on the Internet at http://www.nhmrc.gov.au/publications/_files/n34.pdf.

Yours sincerely

Professor Warwick Anderson
Chief Executive Officer

8 February 2007



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NHMRC SUBMISSION

to the House of Representatives Standing Committee on Health and Ageing *Inquiry into the health benefits of breastfeeding* 15 December 2006

Introduction

In 1981, the World Health Organization recognised the health risks of substituting breastmilk with Infant Formula and developed an International Code for the

Marketing of Breast Milk Substitutes (the WHO Code). The WHO Code was developed in response to the aggressive promotion of Infant Formula by manufacturers which led to a decline in breastfeeding and gave rise to a "bottle feeding culture".

The WHO Code stipulates that there should be absolutely no promotion of breastmilk substitutes, bottles and teats to the general public; that neither health facilities nor health professionals should have a role in promoting breastmilk substitutes; and that free samples should not be provided to pregnant women, new mothers or families. Since 1981, 25 countries have adopted some or all of its provisions and another 53 countries have incorporated many provisions into their laws.

An interpretation of the WHO Code for Health Workers in Australia can be found in the current NHMRC publication *Dietary Guidelines for Children and Adolescents in Australia* (2003) ([Attachment A](#))

<http://www.nhmrc.gov.au/publications/synopses/n1syn.htm>

The *Dietary Guidelines for Children and Adolescents in Australia* (2003) incorporates the *Infant Feeding Guidelines for Health Workers*. The *Infant Feeding Guidelines for Health Workers* provides detailed advice on adolescent pregnancy and breastfeeding, indications for the introduction of solids, breastfeeding initiation and management, problems encountered in breastfeeding, health professionals' responsibilities under the WHO Code, and the use of infant formula.

Since the year 2000, the NHMRC has funded 13 research projects related to breast feeding. The total value of those awards (including out years) is \$3,387,337. New grants for 2007 have yet to be finalised. Details of the 13 breastfeeding grants are included at ([Attachment B](#)).

Terms of Reference of the Inquiry into the health benefits of breastfeeding Submission

This submission addresses each of the terms of reference.

(a) The extent of the health benefits of breastfeeding

Response:

The health advantages of breastfeeding for infants and mothers are covered in the NHMRC's *Dietary Guidelines for Children and Adolescents in Australia* (2003). The following health benefits are identified.

- reduced incidence and duration of diarrhoeal illnesses

Terms of Reference of the *Inquiry into the health benefits of breastfeeding*

Submission

This submission addresses each of the terms of reference.

(a) The extent of the health benefits of breastfeeding

Response:

The health advantages of breastfeeding for infants and mothers are covered in the NHMRCs *Dietary Guidelines for Children and Adolescents in Australia* (2003). The following health benefits are identified.¹

- reduced incidence and duration of diarrhoeal illnesses
- protection against respiratory infection and reduced prevalence of asthma
- reduced occurrence of otitis media and recurrent otitis media
- possible protection against neonatal necrotising enterocolitis, bacteraemia, meningitis, botulism and urinary tract infection
- possible reduced risk of auto-immune disease, such as type 1 diabetes and inflammatory bowel disease
- reduced risk of developing cow's milk allergy
- possible reduced risk of adiposity later in childhood
- improved visual acuity and psychomotor development, which may be caused by polyunsaturated fatty acids in the milk, particularly decosahexaenoic acid
- higher IQ scores, which may be the result of factors present in the milk or of greater stimulation
- reduced malocclusion as a result of better jaw shape and development.

Of particular note is the comment that:

“... there is interest in the long-term effects of perinatal nutrition. Inadequate or inappropriate foetal and early infant nutrition has been linked with subsequent chronic disease in adulthood”².

(b) Evaluate the impact of marketing of breast milk substitutes on breastfeeding rates and, in particular, in disadvantaged, Indigenous and remote communities

Response:

The adoption of the WHO Code and the Marketing in Australia of Infant Formula Agreement (MAIF Agreement)³ means that Infant Formula is not advertised or promoted. The marketing of breastmilk substitutes on breastfeeding rates, particularly among disadvantaged, Indigenous and remote communities is therefore difficult to quantify.

The *Dietary Guidelines for Children and Adolescents in Australia* (2003)⁴ lists the following factors as being relevant to early cessation of breastfeeding in the rural community:

¹NHMRC, *Dietary Guidelines for Children and Adolescents in Australia*, 2003: 6

²NHMRC, *Dietary Guidelines for Children and Adolescents in Australia*, 2003: 5

³ Department of Health and Ageing, *Marketing in Australia of Infant Formulas: Manufacturers and Importers*, 1992.

⁴ NHMRC; *Dietary Guidelines for Children and Adolescents in Australia* 2003:9

- in younger mothers
- in mothers who planned to breastfeed for less than two months
- where fathers did not prefer breastfeeding
- in mothers who did not decide to breastfeed before becoming pregnant
- in mothers whose infants received complementary formula feeds in hospital.

A study of breastfeeding by Indigenous Australian mothers in Kalgoorlie⁵ found that among older women breastfeeding was almost universal, but the rates among young mothers were often much lower.

National breastfeeding data for Indigenous Australians are limited.⁶ The 1995 National Health Survey found that Indigenous mothers breastfed for longer than non Indigenous mothers. The 1994 National Aboriginal and Torres Strait Islander Survey confirmed that Indigenous mothers of higher socio-economic status were more likely to breastfeed and to do so for longer than Indigenous mothers from lower socio-economic groups, but that Indigenous babies in rural areas were more likely to be breastfed for longer than six months compared with those in urban areas.

The information in the *Dietary Guidelines for Children and Adolescents in Australia* (2003) suggests a range of reasons for failure to breastfeed exclusively to six months, including the following:⁷

“Young mothers, Indigenous Australian mothers and mothers from lower socio economic groups generally required more support if they were to maintain satisfactory breastfeeding levels”.

These reasons should be considered in conjunction with the marketing of breastmilk substitutes.

(c) The potential short and long term impact on the health of Australians of increasing the rate of breastfeeding

Response:

The potential short and long term impact on the health of Australians if the rate of breastfeeding was increased could be significant. The benefits to the infant are described in *Dietary Guidelines for Children and Adolescents in Australia* (2003),⁸ which also refers to the reduced risks of developing, and the severity of, the following conditions:

<ul style="list-style-type: none"> • Physiological reflux • Pyloric stenosis • Respiratory illness • Obesity • Gastrointestinal tract disease • Inflammatory bowel disease • Some childhood cancers 	<ul style="list-style-type: none"> • Coeliac disease • Otitis media • Urinary tract infections • Bacteraemia – meningitis • SIDS – sudden infant death syndrome • Necrotising enterocolitis in premature infants
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⁵ NHMRC; *Dietary Guidelines for Children and Adolescents in Australia* 2003:349

⁶ NHMRC; *Dietary Guidelines for Children and Adolescents in Australia* 2003:258

⁷ NHMRC; *Dietary Guidelines for Children and Adolescents in Australia* 2003:349

⁸ NHMRC; *Dietary Guidelines for Children and Adolescents in Australia* 2003:318

The *Dietary Guidelines for Children and Adolescents in Australia* (2003)⁹ also states that:

- children who were breastfed for at least three months showed an improvement in bone mass as eight year old children
- breast milk offers some protection against developing diabetes mellitus
- there is a 21 per cent reduced risk of developing childhood acute leukaemia; and
- lower rates of asthma and atopy.

(d) Initiatives to encourage breastfeeding

Response:

The contributions of the NHMRC to encourage breastfeeding are the development of Guidelines such as the *Dietary Guidelines for Children and Adolescents in Australia* (2003) the funding of research projects and subsequent development of information papers such as *Nutrition in Aboriginal and Torres Strait Islander Peoples* (2000).¹⁰ This particular NHMRC publication was developed to improve the nutrition and health of Aboriginal and Torres Strait Islander communities and included information on breastfeeding in the Indigenous Community.

Research conducted by the NHMRC surrounding breastfeeding reveals that there are a number of factors associated with the initiation and duration of breastfeeding. These findings are presented in the *Dietary Guidelines for Children and Adolescents in Australia* (2003)¹¹ and are as follows:

- Fathers preferred that the mother breastfeed
- Mothers decided pre pregnancy to breastfeed
- Mothers were primiparous
- Maternal grandmothers preferred breastfeeding
- Husbands were professional or administrators.

Additionally, it identifies reasons for terminating breastfeeding¹² as follows:

- mother's perceived insufficient milk supply
- lack of appropriate advice and support when difficulties arise; and
- early discharge from hospital before hospital staff have had sufficient time to help establish breastfeeding.

Community support has been identified as an important aspect of encouraging breastfeeding¹³ and suggests the development of strategies and policies that will:

- Influence the proportion of mothers who intend to breastfeed – the earlier the decision is made, before or during the pregnancy, the greater the likelihood of successful breastfeeding
- Influence the intended duration of breastfeeding through education, example and support
- Influence the attitudes and beliefs of the mother's support network, particularly the father
- Provide antenatal and postnatal education about the day to day practicalities of breastfeeding
- Promote breastfeeding as the social norm, with support and the provision of adequate facilities in social situations and the workplace

⁹ NHMRC; *Dietary Guidelines for Children and Adolescents in Australia* 2003:319

¹⁰ NHMRC; *Nutrition in Aboriginal and Torres Strait Islander Peoples* (2000)

¹¹ NHMRC; *Dietary Guidelines for Children and Adolescents in Australia* 2003:9

¹² NHMRC; *Dietary Guidelines for Children and Adolescents in Australia* 2003:8,9

¹³ NHMRC; *Dietary Guidelines for Children and Adolescents in Australia* 2003:11

- Include the father and/or other support people in as much of the antenatal preparation as possible
- Provide post discharge support for minor problems – from community services, the medical profession and support organisations
- Enhance support for lactation in the workplace, to allow working mothers to continue to breastfeed.

(e) Examine the effectiveness of current measures to promote breastfeeding

Response:

Research has shown that support and encouragement from family members, friends and the whole community are required if breastfeeding rates and the duration of breastfeeding are to be maximised. Breastfeeding rates in Australia are better than those for most other developed countries, but by the age of six months about half of the infants in Australia are no longer breastfed.¹⁴

The single biggest reason for ceasing breastfeeding is a concern by the mother that she is not supplying enough milk for her baby.¹⁵ Another difficulty in establishing breastfeeding is that modern hospital practice involves discharging mothers quite early (often within 24–48 hours of delivery) with the result that breastfeeding may not have been fully established. Establishment of a milk supply takes around three days and some mothers feel insecure about their ability to breastfeed away from health professional support.¹⁶

The *Dietary Guidelines for Children and Adolescents in Australia* (2003) suggests an initiation rate in excess of 90 per cent, and 80 per cent of mothers breastfeeding at six months as achievable goals in Australia.¹⁷ At the time of its development, the *Dietary Guidelines for Children and Adolescents in Australia* (2003) noted that fewer than 20 per cent of mothers are achieving the goal of their baby being exclusively breastfed to age six months.¹⁸ Using these figures it is clear that breastfeeding rates are falling well short of the goal.

The current strategies to promote breastfeeding would benefit from being reviewed in order to identify areas for improvement.

(f) The impact of breastfeeding on the long term sustainability of Australia's health system

Response:

The health benefits of breastfeeding and the costs to the community of not breastfeeding are documented in the *Dietary Guidelines for Children and Adolescents in Australia* (2003). From studies conducted in Arizona and Scotland, it was estimated that for every 1000 infants who were never breastfed there were in excess of 2030 doctor visits and more than 200 inpatient days and 600 prescriptions, compared with infants exclusively breastfed for more than three months.¹⁹

¹⁴ NHMRC; *Dietary Guidelines for Children and Adolescents in Australia* 2003:307

¹⁵ NHMRC; *Dietary Guidelines for Children and Adolescents in Australia* 2003:8

¹⁶ NHMRC; *Dietary Guidelines for Children and Adolescents in Australia* 2003:9

¹⁷ NHMRC; *Dietary Guidelines for Children and Adolescents in Australia* 2003:4

¹⁸ NHMRC; *Dietary Guidelines for Children and Adolescents in Australia* 2003:3

¹⁹ NHMRC; *Dietary Guidelines for Children and Adolescents in Australia* 2003:13

In Australia it has been suggested that if the prevalence of exclusive breastfeeding to three months was increased from 60 to 80 per cent, at least \$11.5 million could be saved each year in health care costs.²⁰

Dietary Guidelines for Children and Adolescents in Australia (2003) states that the health costs of weaning 30 percent of infants onto infant formula by three months of age could be around \$290 million a year in Australia, based on an analysis of just five illnesses for which breastfeeding is proven to have protective effects.²¹

Breastfeeding also confers health advantages that persist into later life. The *Dietary Guidelines for Children and Adolescents in Australia* (2003) mentions that exclusive breastfeeding seems to have a protective effect against some risk factors for cardiovascular disease later in life, including lipoprotein and glucose levels.²²

In summary, the total value of breastfeeding to the community makes it one of the most cost effective primary prevention measures available and well worth the support of the entire community.²³

²⁰ Drane, D 1997; Breastfeeding and formula feeding: a preliminary economic analysis, *Breastfeed Rev*, 5:71

²¹ NHMRC; *Dietary Guidelines for Children and Adolescents in Australia* 2003:14

²² NHMRC; *Dietary Guidelines for Children and Adolescents in Australia* 2003:322

²³ NHMRC; *Dietary Guidelines for Children and Adolescents in Australia* 2003:14

Grant Type Grant Subtype		Scientific Title	Simplified Title
NHMRC Project Grant	Standard Project Grant	Cytokines in milk modulate the development of immune responses in the infant	Growth factors in maternal milk and development of infant immune responses
NHMRC Project Grant	Standard Project Grant	Perth Aboriginal Breast Feeding Study: Reasons for not breast feeding and for the early cessation of breast feeding.	Perth Aboriginal Breast Feeding Study
NHMRC Project Grant	Standard Project Grant	Is there cytomegalovirus in mothers breastmilk and does it cause infection in very premature babies?	Do very premature babies catch cytomegalovirus from their mother's breast milk?
SCHOLARSHIP	Travelling Award for Research Training Scholarship	Breast milk cytokines and wheezing illness in children: a prospective birth cohort study	Breast milk cytokines and wheezing illness in children: a prospective birth cohort study
FELLOWSHIP	Public Health (Australia) Fellowship	Reducing the unintended adverse outcomes of epidural analgesia for childbirth	Reducing the unintended adverse outcomes of epidural analgesia for childbirth
NHMRC Project Grant	Standard Project Grant	DHA for the Improvement of Neurodevelopmental Outcome in preterm infants: The DINO Trial	DHA intake & neurodevelopment of preterm infants
SCHOLARSHIP	Public Health Postgraduate Scholarship	Alcohol consumption by women in Australia: Changes with pregnancy and breastfeeding.	Alcohol consumption by women in Australia: Changes with pregnancy and breastfeeding.
NHMRC Project Grant	Standard Project Grant	THE ROLE OF SIALIC ACID IN INFANT NUTRITION AND BRAIN DEVELOPMENT	Unique sugars in breast milk: are they food for brain?
SCHOLARSHIP	Public Health Postgraduate Scholarship	Determinants and health outcomes of mother's return to paid work in the first postpartum year	Determinants and health outcomes of mother's return to paid work in the first postpartum year
FELLOWSHIP	Industry Fellowship	Immune-regulation by milk extracts in vitro as well as in vivo in an animal model of formula feeding	Immune-regulation by milk extracts in vitro as well as in vivo in an animal model of formula feeding
FELLOWSHIP	Health Professional Research Fellowship	Nipple & breast pain in lactating women: the roles of Staphylococcus aureus & Candida albicans.	Nipple & breast pain in lactating women: the roles of Staphylococcus aureus & Candida albicans.
NHMRC Project Grant	Standard Project Grant	Caseload midwifery for women at low risk of medical complications: a randomised controlled trial	One-on-one midwifery care for women at low risk of medical complications: a randomised controlled trial
NHMRC Project Grant	Public Health Project Grant	Effect of breastfeeding education in the middle of pregnancy on duration of breastfeeding	Effect of breastfeeding education in the middle of pregnancy on duration of breastfeeding