

Letters

COMMENT & RESPONSE

In Reply We thank Hilvo for commenting on our article¹ and highlighting studies from the 1980s that reported infant responses to maternal dietary exclusions. In fact, there is a longer history of this concept that a breastfeeding woman's dietary intake may cause allergic reactions in her infant, with the first report of infant "allergic" response to maternal intake of chocolate published in 1918.² However, as Hilvo rightly points out, and Cochrane reviews have also identified, randomized clinical trial evidence in this field is inconsistent. Case reports, observational studies, and personal and clinical experience support the existence of infants whose symptoms respond to maternal dietary intake. But this phenomenon occurs in both allergic and nonallergic infants.

The studies that Hilvo cites and other, double-blinded trials in this field have generally failed to demonstrate that allergy is the underlying mechanism in infant symptoms related to maternal diet. Other work of a comparable size and design suggests that maternal dietary intake of alcohol, garlic, and other specific foods can influence breast milk flavor and infant feeding behavior, unrelated to allergy.³ Given the nanogram quantities of allergenic food proteins found in human breast milk, mechanisms other than typical IgE-mediated or non-IgE-mediated allergy are likely to be important causes of infant symptoms in response to maternal diet. The practical implication of this is that advice to avoid common allergens such as egg, milk, or peanut for managing infant symptoms may be misplaced, and the use of allergy testing to guide maternal dietary exclusions may be potentially misleading.

Breastfeeding women are probably best placed to judge, through their own experiences, whether their infant responds to maternal diet, as the evidence to support health care professional-guided maternal dietary exclusions is weak. The context of this discussion is important, and we should acknowledge that by allowing the industry that most profits from overdiagnosis of milk allergy to play a key role in development and dissemination of guidance, the child health community has permitted this issue to become clouded by marketing messages. The consequence is overdiagnosis and overtreatment of milk allergy; for example, in a 2020 UK study, we found 14% of families reported a milk allergy in their infant, but milk allergy could only be confirmed in 1.4%, and this pattern of overreporting was not seen for other food allergens (Table).⁴

Industries that manufacture health care treatments have an important role in product development, manufacture, testing, and supply, but they should not be organizing health care professional or patient education, developing guidelines, or supporting patient charities or clinical service delivery. When marketing initiatives do encroach into these areas, the consequences for public health can be catastrophic.⁵ The infant formula industry has a long history of marketing practices, often undertaken in close collaboration with child health professionals, that

Table. Overreporting of Milk Allergy in a Recent Population of 2-Year-Old Infants

Variable	No./Total No. (%)			Ratio of parent-reported to proven allergy
	Parent report of allergy	Parent report of immediate allergy ^a	Proven allergy ^b	
Cow's milk	163/1173 (14)	107/1173 (9)	17/1174 (1)	9.6: 1
Egg	90/1173 (8)	85/1173 (7)	55/1174 (5)	1.6: 1
Peanut	19/1172 (2)	18/1172 (2)	18/1174 (2)	1.1: 1

^a Immediate allergy defined as a reaction within 2 hours of eating the food.

^b Immunoglobulin E-mediated allergy proven using oral food challenge or a published, validated algorithm.

undermine breastfeeding and adversely affect infant health.⁶ The child health community needs to wake up to this issue and put some distance between infant formula companies and education, guidelines, and clinical decision-making.

Daniel Munblit, MD, PhD

Debra J. Palmer, BSc, BND, PhD

Robert J. Boyle, MB, ChB, PhD

Author Affiliations: Department of Paediatrics and Paediatric Infectious Diseases, Institute of Child Health, Sechenov First Moscow State Medical University, Moscow, Russia (Munblit); Telethon Kids Institute, University of Western Australia, Western Australia, Australia (Palmer); National Heart and Lung Institute, Imperial College London, London, England (Boyle).

Corresponding Author: Robert J. Boyle, MB, ChB, PhD, Imperial College London, Department of Paediatrics, Wright Fleming Building, Norfolk Place, London W2 1PG, England (r.boyle@imperial.ac.uk).

Published Online: January 11, 2021. doi:10.1001/jamapediatrics.2020.5320

Conflict of Interest Disclosures: Dr Munblit reports giving paid lectures for Merck Sharp and Dohme and Bayer and received funding from the 5-100 Russian Academic Excellence Project. Dr Boyle reports consultancy payment from Dairy Goat Co-Operative (NZ) Ltd for designing a clinical trial of an infant formula in 2017, from DBV Technologies and Prota Therapeutics for attending advisory board meetings in 2018 and 19, from Cochrane for work as Senior Editor for the Children and Families Network of Cochrane Review Groups, and for acting as an expert witness in a class action lawsuit relating to an infant formula health claim in 2020. No other disclosures were reported.

1. Munblit D, Perkin MR, Palmer DJ, Allen KJ, Boyle RJ. Assessment of evidence about common infant symptoms and cow's milk allergy. *JAMA Pediatr.* 2020;174(6):599-608. doi:10.1001/jamapediatrics.2020.0153

2. Talbot FB. Eczema in childhood. *Med Clin N America.* 1917;1:985-96.

3. Spahn JM, Callahan EH, Spill MK, et al. Influence of maternal diet on flavor transfer to amniotic fluid and breast milk and children's responses: a systematic review. *Am J Clin Nutr.* 2019;109(7)(Suppl 7):1003S-1026S.

4. Chalmers JR, Haines RH, Bradshaw LE, et al; BEEP study team. Daily emollient during infancy for prevention of eczema: the BEEP randomised controlled trial. *Lancet.* 2020;395(10228):962-972. doi:10.1016/S0140-6736(19)32984-8

5. Podolsky SH, Herzberg D, Greene JA. Preying on prescribers (and their patients): pharmaceutical marketing, iatrogenic epidemics, and the Sackler legacy. *N Engl J Med.* 2019;380(19):1785-1787. doi:10.1056/NEJMp1902811

6. Crowther SM, Reynolds LA, Tansey EM. *The Resurgence of Breastfeeding, 1975-2000.* The Wellcome Trust Centre for the History of Medicine at UCL; 2009.