

Response to comments by Kersting *et al.*

We welcome the response to our recent article (Reilly & Wells, 2005), in part because we wanted to encourage the collection and publication of more empirical data on milk energy transfer from mothers who breast-feed exclusively up until their baby is 5–6 months old. Kersting *et al.* (2006) provide new data on the quantity of breast-milk transferred in thirty-nine mother–infant pairs, collected over a 16-year period in Germany. As we and others have noted, there is a dearth of energy-balance data for mother–infant pairs exclusively breast-feeding beyond 4 months (Butte *et al.* 2002; Reilly *et al.* 2005). Kersting *et al.* (2006) stated that fewer than 20% of the mothers in their sample were ‘exclusive and predominant breast-feeders’ by 6 months, and it is likely that the small minority still breast-feeding exclusively at 6 months were atypical.

This problem of massive attrition from longitudinal studies of milk transfer in exclusive breast-feeding is serious, and we cannot have confidence that those who remain in such studies represent all other mother–infant pairs (Butte *et al.* 2002). Mothers who remain in such studies, including the Dortmund Nutritional and Anthropometric Longitudinally Designed Study (Kersting *et al.* 2006), are highly self-selected and may be particularly able to meet the energy requirements of their baby by exclusive breast-feeding. How they do so, and how typical they are, are questions that require further study. Basing population-wide recommendations for the duration of exclusive breast-feeding on the experience of a small minority of (possibly atypical) mother–infant pairs seems to us to be premature, particularly in the light of the doubts that our review of empirical data have presented.

Kersting *et al.* (2006) questioned whether the UK infant weight reference data we used to estimate energy requirements were largely based on formula-fed infants, who might have been heavier than exclusively breast-fed infants of the same age. The UK 1990 weight reference data in infancy (Freeman *et al.* 1995) were derived from several sources, notably the Cambridge Infant Growth Study (Cole *et al.* 2002), with a higher proportion of the sample breast-feeding than was typical of the UK at the time. Furthermore, despite differences in the patterns of growth, the weight of exclusively breast-fed infants in the Cambridge Infant Growth Study at 5–6 months was similar to that of the rest of the cohort (Cole *et al.* 2002).

The main scientific question, based on the accumulated body of evidence from our systematic review (Reilly *et al.* 2005), remains whether or not infants of average weight or above in the UK can obtain sufficient milk energy from exclusive breast-feeding at 6 months of age. Larger prospective studies of all components of the infant energy-balance

equation are necessary to answer this question. Although exclusive breast-feeding provides sufficient energy for some infants at 6 months, published data suggest that, for infants of average weight or above, meeting infant energy needs will become increasingly difficult by 6 months. We support the suggestion by Kersting *et al.* (2006) that more energy-balance research is necessary in order to address whether (and how) the recommendation to breast-feed exclusively is achievable by more typical mother–infant pairs.

Finally, we emphasise that the issue of the adequacy of exclusive breast-feeding to 6 months merits greater attention in order to promote breast-feeding successfully in the whole population.

John J. Reilly¹ and Jonathan C. K. Wells²

¹University of Glasgow Division of Developmental Medicine
1st Floor Tower QMH
Yorkhill Hospitals
Glasgow
G3 8SJ
UK

²MRC Childhood Nutrition Research Centre
Institute of Child Health
University College London
30 Guilford St
London
WC1N 1EHUK

Email: jjr2y@clinmed.gla.ac.uk

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