

## Response to the recent study from New Zealand

Morison, BJ; Taylor, RW; Haszard, JJ et al (2016) 'How different are baby-led weaning and conventional complementary feeding? A cross-sectional study of infants aged 6-8 months', *BMJ Open*. DOI: 10.1136/bmjopen-2015-010665.

This study compared three groups of babies, one defined as following baby-led weaning ('full BLW'), one as 'partial BLW' and one as 'traditional spoon feeding' (TSF). The main findings were:

- BLW appears to be associated with exclusive breastfeeding to six months, not starting solid foods until six months, and a greater likelihood that the baby will share family mealtimes and family food. These are all good things!
- BLW babies appear to eat more saturated fat and less food containing iron, zinc and vitamin B<sub>12</sub> than spoon-fed babies. On the surface, this looks less good.
- A high proportion of babies appear to be offered foods that may present a choking risk, with the possibility that this is more likely to be the case with BLW. This is also a cause for concern.

So, does this mean that BLW is potentially harmful, as some media sources have suggested? No, it doesn't. Here are some reasons why that conclusion is unfounded:

1. The study's sample size was small (and the researchers acknowledge this). This means it's difficult to generalise the findings to all babies.
2. The names of the three groups of babies were chosen for the purposes of the study and are not an accurate description of either BLW or traditional spoon feeding. Of the babies in the 'full BLW' group:
  - 28% had had at least half of their first solid foods as purees and 34% had had at least half fed to them by an adult; for some, this was still the case on the days (between six and almost nine months) when their food intake was recorded for the study.
  - 50% were reported to have started solid food before six months (although whether they had begun to eat it or merely to handle it is not clear).
  - Several were reported as eating at least some of their meals separately from other family members. At best, only 60% shared the same food as the rest of the family, prepared in the same way – and not necessarily at every meal.

This is *not* 'full BLW' – it's what a group of New Zealand parents who described themselves as following BLW were actually doing. Plus, as my paper *Defining BLW* ([http://www.rapleyweaning.com/assets/Defining\\_BLW.pdf](http://www.rapleyweaning.com/assets/Defining_BLW.pdf)) explains, while it's possible to combine spoon feeding and self-feeding, it isn't possible to do 'partial BLW', since BLW is an over-arching approach, not simply a method. While these distinctions may not matter much in everyday terms they are hugely important for the validity of research studies – at least as crucial as defining 'exclusive breastfeeding' – and they mean this study *doesn't* provide an accurate picture of the real differences between BLW and 'traditional' spoon feeding.

3. The parents in the study, not the researchers, selected which group they thought they belonged in, which means that the distinctions between the three groups, as well as their definitions, are probably quite blurred. Indeed the groupings are likely to reflect the parents' knowledge of both BLW and 'traditional' feeding at least as much as what they were actually doing. A key point is that the coincidence, in terms of timing, between the emergence of BLW and the move to six months as the minimum recommended age for solid feeding – both of which date back to 2002 – has meant that many people are unaware that finger foods were already recommended from six months (alongside purees) prior to this. It is quite possible that study parents who were offering their baby *any* finger foods believed that they were doing BLW – either partial or full.
4. Data from three studies were combined in this single study. Some of the families had recorded their babies' intake over three (non-consecutive) days and some over only one day. Many families don't eat food from every food group every day, yet they still achieve a balanced diet over the course of a few (consecutive) days. The study data may not reflect this, meaning that babies in all the groups could, in reality, have been eating more (or less) of any of the food groups than the results suggest.
5. The babies' intake of breastmilk could not be measured, only estimated. Since all the 'full BLW' babies were fully breastfed (with no formula), their milk intake involved more guesswork than the other babies'.
6. The authors of the study state that "by six months of age substantial amounts of iron are needed from complementary foods". This is not quite true. It would be more accurate to say that *from* six months of age *small* amounts of iron may be *beginning to be needed* from complementary foods.
7. The authors suggest that the 'full BLW' babies may have been more at risk of consuming insufficient iron *because* they were breastfed, since "infant formulas have a higher iron concentration than breastmilk". This is misleading: it is well known that the iron in formula is in a form that babies' bodies can't easily absorb (which is why it has to contain so much), whereas the iron in breastmilk is readily available to the baby, even though the amounts are small. There is no consensus on how much additional iron a baby of six, seven or eight months may need, especially if s/he is breastfeeding.
8. It's not clear whether the babies in the three groups were offered the same *opportunities* to eat foods rich in iron, zinc and vitamin B<sub>12</sub>. It may be that the BLW babies chose to eat less of those foods or it may be that they were offered less.
9. The report doesn't state how much the babies were having in the way of non-milk drinks. It is quite possible that the 'full BLW' babies were getting all their fluid in the form of breastmilk, rather than being given water or juice. This is important, both in terms of estimating their total milk intake and because it may have affected how much they needed in the way of additional nutrients (and therefore how much of the various solid foods they ate). Breastmilk may not contain very much iron (or zinc, or vitamin B<sub>12</sub>) but it does contain more than water or juice.
10. The babies' iron levels weren't measured. The babies in all three groups may have consumed less than the expected amount of iron from solid food but that doesn't mean any of them were lacking in iron.

11. The issue of saturated fat is a bit of a red herring: as the authors acknowledge, the proportion of saturated fat in breastmilk is higher than the proportion in the solid food eaten by any of the babies!
12. The study raised concerns about spoon-fed babies as well as those said to be following BLW. In particular, the 'TSF' infants' iron intakes were low and most were being offered foods that posed a risk of choking.

The findings suggest that many of the parents (in all three groups) were following the old advice, to start with fruit and vegetables and to introduce meat 'a few weeks later'. Prior to 2003, when the recommendation was to introduce solid foods from four months, this tended to ensure that most babies were being offered iron-rich foods by six months. Now that the recommended *starting* age is six months, this approach is inappropriate. As the authors of the study point out, iron-rich foods should be offered from six months, irrespective of whether other foods have already been introduced. Interestingly, the emphasis in the report is on the use of iron-fortified cereal and red meat (which may reflect the fact that some of the data came from a study that was part-funded by Meat and Livestock Australia). There are, of course, many other foods that are a good source of iron.

When it comes to choking, it's important to note that the nature of the food is not the only factor; the posture and chewing abilities of the individual also matter, as does whether or not s/he is able to concentrate on eating. The authors of the study note that some writers believe that BLW babies may be more likely to choke "because they are feeding themselves whole foods during the early stages of complementary feeding, while they are still learning to chew and swallow". But this implies babies can 'learn' to chew and swallow without being given anything chewable. This isn't how development works! In fact there is no evidence that BLW babies are more at risk of choking than babies who are spoon fed. Indeed, the opposite may even be true, since BLW babies are given the opportunity to practise chewing from the point when the relevant skills are developing. Plus, since they are not under pressure to eat they are able to focus on the food and eat mindfully, at their own pace, which allows them to concentrate on what is happening inside their mouth. If it *is* the case that BLW parents are more likely to offer their baby foods that present a 'choking risk', it may be because those babies have demonstrated that they have the necessary skills to manage them.

I welcome any and all research on the introduction of solid foods and I think this study raises some interesting issues. Crucially, it reinforces the importance of offering babies foods that are rich in iron, zinc and vitamin B<sub>12</sub> from six months onwards, whether the approach being taken is BLW or conventional weaning, and of exercising care where the risk of choking is concerned. What it doesn't do, though, is provide evidence that BLW is any less nutritionally sound and/or safe for babies than conventional weaning.

I look forward to more research on the fascinating topic of how solid feeding begins.

Gill Rapley, July 2016