

A low allergen diet may help breastfeeding mothers with colicky babies

Research question Does a maternal diet low in allergens calm breastfed babies with colic?

Answer In a randomised trial, babies whose mothers ate a low allergen diet cried less than babies whose mothers ate wheat, peanuts, soy, and dairy products.

Why did the authors do the study? Infantile colic is common and can be distressing and exhausting for new mothers. There's some evidence that maternal diet might be to blame for some cases in breastfed infants. These authors wanted to test this theory formally in a prospective randomised trial. They particularly wanted to focus on the role of dietary allergens such as wheat and dairy products.

What did they do? They recruited 107 healthy breastfeeding women whose babies had colic. Most of the babies were less than 6 weeks old, the age at which colic tends to peak, and they were crying or fussing for more than 5 hours each day. The participants, who were recruited from well infant clinics in Melbourne, Australia, were randomised to a low allergen or a control diet for one week. Women on the low allergen diet excluded dairy products, soy, wheat, eggs, peanuts, tree nuts, and fish. Control women did not. Instead, they were asked to include one portion of wheat and peanuts each day, one chocolate covered cereal bar, and a trial drink containing soya and milk. The women recorded their babies' distress on validated charts for two days before the diet began and for two days at the end of the week. The authors compared the proportion of babies in each group who showed at least 25% improvement during the week.

What did they find? Ninety babies completed the study. Three quarters (74%, 35/47) of those in the low allergen group were at least 25% better by the end of the week, compared with only 37% (16/43) of babies in the control group. That's an absolute risk reduction of 37% (95% CI 18% to 56%, $P < 0.001$) for the low allergen diet. Overall, the diet reduced babies' crying by about one and a half hours a day on average, although a similar proportion of mothers in both groups reported a subjective improvement in their baby's behaviour (29/42 in the low allergen group and 22/39 in the control group). In general, the women stuck to the diet they were given, although 17 of the 41 women in the control group had started to exclude potentially allergenic foods by the end of the trial.

What does it mean? This small trial suggests that allergens in the maternal diet have at least something to do with infantile colic in young babies who are exclusively breast fed. Excluding major allergens such as wheat seemed to reduce crying by enough to make a difference to most women—about one and a half hours a day. However, the women knew which diet they were following and reported their own babies' distress using charts, so bias is always possible.

We still don't know exactly what causes colic. For some women, a hypoallergenic diet may help, at least in the short term. Diet is unlikely to be the full story, however. Two thirds of the babies in this trial still had significant colic at the end of the week, regardless of their mothers' intake of dietary allergens.

Hill et al. Effect of a low-allergen maternal diet on colic among breastfed infants: a randomized, controlled trial. *Pediatrics* 2005;116:709-15

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Editor's choice

Swept along by the tide

Do health managers read the *BMJ*? A member of our editorial board tells me that an otherwise evidence-free meeting of senior healthcare managers was illuminated by someone brandishing recent *BMJ* articles on primary care and deprivation. Whether they changed the outcome of the meeting he does not relate, but I will use this opportunity to tell authors that the *BMJ* is keenly interested in publishing research that will help improve healthcare systems—variously called effectiveness research, quality improvement, or implementation science.

Faced with imperfect delivery of health care, it's natural to want to change things and to hope that change will be for the better. But Ann McDonnell and colleagues (p 109) warn that enthusiasm for organisational change can undermine attempts at evaluation and can blind people to potential downsides. Acute pain teams and NHS Direct were both top down innovations that were swiftly rolled out across the UK without, say the authors, adequate evaluation, leaving pain teams struggling for funds and NHS Direct under a cloud of uncertain cost benefit. (They could have used payment incentives for GPs as another example (p 71).) By comparison, they say the bottom up introduction of stroke units has been more incremental, and is now supported by good evidence.

Surgery is another area where under-evaluated technologies are adopted, at the risk of wasting resources and harming patients. Charles Wilson says this can be driven by patients' demands, low cost to the surgeon of learning the procedure, and aggressive promotion by manufacturers (p 112). He suggests six key questions that surgeons and institutions should ask before adopting new surgical technologies.

Enthusiasts for change will complain that all this evaluation stifles change—until some other enthusiast imposes an ill thought out change on them. There's no regulatory body that evaluates the safety of computer technologies for hospital administration, but changes here can have harmful consequences (News Extra, bmj.com) or just make you "intemperate" (p 127).

One unwelcome change for some readers has been the closure of access to the *BMJ*'s non-research articles, which up until now were free for the first week of publication. The change was necessary to maintain subscription revenues. The peer reviewed research articles remain open access (free from the day of publication on bmj.com as well as being on PubMed Central), and the whole journal remains free to most countries in the developing world (those on the HINARI list). Non-research articles become free to all after a year of publication. It is always hard to be asked to pay for something that has been free, but we hope that those readers who don't get the *BMJ* free through their institution will see enough value in it to pay £20/\$37/€30 for a year's full online access.

Fiona Godlee *editor* (fgodlee@bmj.com)

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