

# Baby Friendly News

UNICEF UK Baby Friendly Initiative

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Women beware women

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## Your new website is here

Following its unveiling at last year's conference, the new Baby Friendly Initiative website is now live and available for you to use. The new website contains all the information that was previously available, but with many elements improved and some important new features:

### Care Pathways

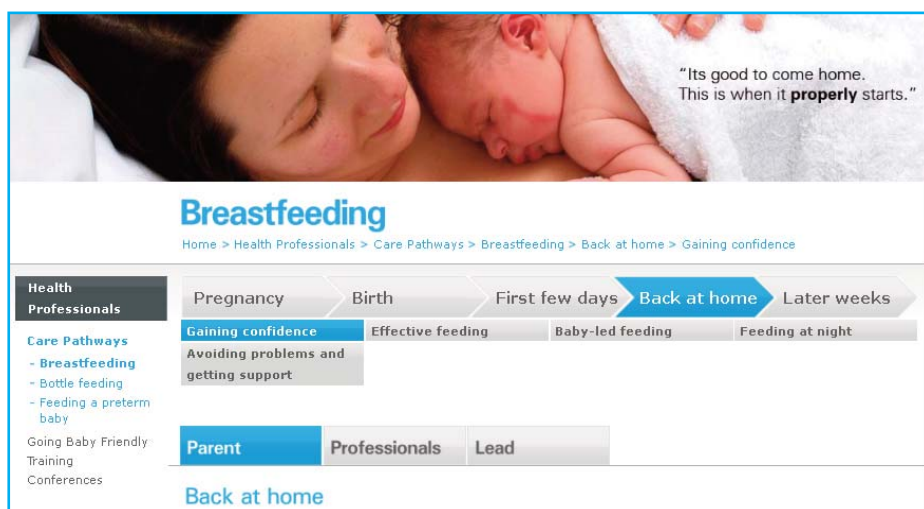
The most important new feature is the creation of Care Pathways. These aim to bring the focus of practice back to the mother's journey, including:

- the care that the mother should expect to receive at that moment
- the policy that informs that care
- how that policy will be implemented on the ground
- the best ways to ensure that care remains consistent.

With three segments for parents, health professionals and leads containing the relevant information relating to each step, you should be able to understand the practical application of the Baby Friendly standards much more clearly.

### Improved research archive

The new research archive will list the research by health issue and we are developing brief overviews of the key findings as they stand so that you can



see at a glance what the general position of most evidence is, which are the key papers and what are the most recent ones.

### Online discussion forums

For the first time, the Baby Friendly website will be hosting discussion forums so that health professionals can build up networks of support and exchange information, hints and experience about all things Baby Friendly. Users can sign up for the forums (with their NHS or university email accounts to ensure security) where they can post questions or join in existing discussions.

The new website also has the capacity to host video and audio, and we are grateful to Best Beginnings for

sharing clips of From Bump to Breastfeeding with us.

Also, full online booking for courses and conference will be available later this year and development is progressing on an online training package for GPs. Please sign up to Baby Friendly Initiative news mailings to keep up with the latest changes.

We will be updating and improving the website continually and are keen to hear as much feedback from you as possible. Let us know what works, what doesn't and what else you'd like to see. The website is only successful if you find it a useful, up-to-date resource that meets your needs.

It's your website – we hope you like it.



Education, advice and audit to improve  
NHS support for breastfeeding

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# Its going to be tough....but we can do it

When Sue Ashmore, UNICEF UK Baby Friendly Initiative Director, got up to take the stand at the start of the conference, it was with a sense of solidarity and triumph, because, once again, hundreds of the most dedicated and committed individuals from within the NHS had battled against extreme conditions to get to Harrogate – and once again, they had won.

Sue went on to deliver a rallying cry. Despite the unprecedented reorganisation and uncertainty facing the NHS, there were some significant reasons for hope, and a need to stand firm to ensure that all the amazing achievements from the past few years do not get swept away. The recently published public health white paper was much more overtly supportive of breastfeeding than many had feared, and there was hope of an outcome for breastfeeding in the public health outcomes framework document after Public Health

Minister Anne Milton asked UNICEF to draft an outcome for submission.

“Over the past few years an awful lot of us have put an awful lot of pressure into moving things forward for breastfeeding, and we have had quite an effect,” said Sue. “Breastfeeding is starting to be recognised as important in public health and public wellbeing and as a way of saving money, and we’ve done that. All of you know that it has been one hell of an effort. We are moving forward and that is fabulous.

“But you also know that good care is quite patchy and inconsistent, and my fear is that if we stop now we are going to roll back down the hill and all this effort we have put in over the past few years would be for nothing. We have to fight. If the people in this room don’t fight then no one will fight. We have to fight at the national level and make our voices heard

at every possible opportunity, but you also need to do it on a local level, and we can help you do that.”

“When you are being patronised and being told that breastfeeding is not a priority in these cash-strapped times you have got to make the case that it is. And we can help you with that. If your manager won’t listen, go to your manager’s manager, and go up and up until you get to the chief executive. We don’t just owe it to the mothers and babies in our care, we owe it to ourselves. If we go down, we go down fighting.”

Following this call to action, Sue went on to inform people of the new services available, including the cost benefit analysis, the newly revised Maternity Standards, extra help for accredited units, new training for staff in the neonatal ward, and the bottle-feeding leaflets for mothers and for health professionals produced during 2010.

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## Trust your instincts

Christina Smillie is a paediatrician and lactation consultant. In her practice, she has developed a deep understanding of how mothers and babies learn from each other, and how this natural instinctive behaviour can be all too easily disrupted by the best intentions of health professionals and concerned relatives.

Christina began by laying out her three messages:

- Babies are hard-wired to search for and find the breast, and attempt to suckle,
- This is an innate ability and is not limited to the first 24 hours after birth but exists for months and possibly years,
- This ability is innate in both mother and baby, and its success depends on uninterrupted interaction between the two.

Yet these days we rarely see this innate ability in action because “our rules and instruction that we give to mothers can get in the way because they can override mothers’ instincts,” explained Christina. “We can get in the way by putting the baby in certain breastfeeding positions,

and my opinion is that a lot of the problems that we see for both mothers and babies are the result of us getting too much in the way of mothers instincts.”

“I like to think of breastfeeding and lactation as a single organ which contains two organisms; two people interacting in one organ system. But in order to have that you need to have communication between the organisms.” Along with nerves and hormones, this communication is called bio-behavioural communication and depends on having physical proximity, close contact and reading each others cues.

In her work, Christina’s first step is to encourage the mother and baby to respond to each other’s instinctive cues. She helps the mother get the baby into a calm and communicative state through gently stabilising the neck and torso, rocking the baby, touching and stroking, and talking baby language. Once in this state the mother and baby are more able to communicate instinctively and understand each other, and respond to feeding cues.

“Mothers also have instincts,” says Christina, “and if you place the baby on their chests they will start stroking the baby over and over again. To bring out the babies’ competencies we need various things in the right place at the right time. They need physical stability and emotional stability; placing them on the chest gives a tactile stimulation which makes the baby start searching and crawling, and then we have the classic rooting reflex.”

“Start with a nice calm mother and baby. They do not need to go through this long sequence of stabilising the neck and torso every time. Once they have learnt this response the baby can just be anywhere near the mother and will then start searching around for the breast. The mother should be able to squirm around to get comfortable, then she should be allowed to just follow her instincts, talking to her baby. There is no agenda, and it does not necessarily have to be skin on skin. Then this will allow the baby, and not the mother, to initiate the feeding.”

# Nurturing as nature intended

Professor Helen Ball started her talk very honestly – warning that it might make our brains ache. She began by examining what it means for something to be natural – a concept widely exploited by commercial companies wanting to promote their products as “natural”.

We have largely lost our confidence in the natural abilities of our bodies, said Helen. Lactation has become viewed as an unreliable body function and women have lost confidence in the ability of their bodies to nurture their babies. Cultural realities mean that babies are not always easy to breastfeed.

“So much breastfeeding support focuses on troubleshooting the mismatch between cultural reality and natural assumptions,” explained Helen. “We all know that breastfeeding in western society is the sole domain of neither nature nor nurture, but a complex interaction between the two. But I suggest we could help bring natural ideal and cultural reality closer together in two ways. Firstly we could recalibrate our perception of what the natural ideal entails, and secondly, we could try understanding the biological trade offs inherent in infant feeding in all female mammals. Female mammals don’t feed their infants in some ideal perfect world; they optimise their feeding habits to suit the environment they find themselves in.”

Delegates were then taken on a fascinating but necessarily brief historical journey to understand what it means to be a mammal, and how it ended up that the ability to breastfeed came to categorise our species.

Was the reason that we were named after the mammary gland a political reaction against the practice of middle-class and rich women sending their children away to poor women in the countryside to be wet-nursed, putting massive pressure on lactating peasant women and resulting in lack of nutrition for their own children?

Or was it, as some anthropologists have claimed, because the female mammal is truly extraordinary, like an alchemist, able to transform whatever food is available – whether it is shellfish, grass, other mammals, insects, even toxic plants – into a blend of nutrients and antibiotics that can sustain our offspring during the hazardous post birth period? Is this ability, combined with the ability to stockpile nutrients and dole them out to offspring even when food is scarcely available the key adaptation of mammals?

Either way, it is a truly remarkable ability, and one that has determined to a large extent how the human race has evolved. Because the large human brain would be difficult to deliver through a bipedal pelvis, human beings are born neurologically immature. Unlike many other mammals born at this stage, our young cannot get up and follow us around when they want to feed. So feeding our offspring comes at a greater cost to human mothers than it does to mothers of other mammalian precocial species, because our infants can’t cling to us or follow us, so we have to carry them with us during this period of extra utero gestation.

Drawing parallels with Christina Smillie’s earlier talk, Helen went on to explain that our babies are born with a suite of biological and behavioural expectations to facilitate feeding, which require being in contact with their mother in order to express all those innate behaviours, and to have the mother respond to them.

“What nature didn’t intend,” continued Helen, “were the hindrances of breastfeeding initiation that increase the cost of breastfeeding for the mother. For example, the practice of giving mothers analgesia to mothers in labour which leads to sleepy babies, post delivery separation – missing the quiet alert phase, when the baby is receptive to expressing these behaviours; scheduled deliveries, C-sections where you end up with mucousy babies who haven’t experienced

labour hormones and haven’t cleared their lungs, and mother-baby separation where the mother is unaware that her baby is expressing normal instinctive innate cues because she is not close enough to observe them.”

One way of thinking about how breastfeeding can be enabled to happen is by considering the cost benefit model of how a woman makes a decision. Helen put up a graph showing two rising and overlapping lines, one a curve showing the benefits of breastfeeding over time, and one straight line showing the costs to the mother of breastfeeding over time. The separation of the lines at any point in time illustrated the difference in the amount of effort put in to feeding the baby compared to the benefits received. It was helpful, explained Helen, to consider how breastfeeding interventions might reduce the costs, or at least the perceived costs, of breastfeeding to mothers whilst increasing the benefits, or perceived benefits, of breastfeeding.

Ways in which costs might be reduced could be through making breastfeeding easier and less painful via timely and effective trained help, making night time feeding easier, facilitating frequent feeding to increase the milk supply, providing emotional and social support for breastfeeding mothers.

Equally, it is important that breastfeeding interventions increase the (perceived) benefits of breastfeeding, through promoting an understanding of the associated health benefits for the infant.

In summary, said Helen, for breastfeeding interventions to be successful they must either reduce the cost to the mother or increase the benefit, or ideally both. And she warned that formula companies would undoubtedly be trying to persuade mothers that the costs of breastfeeding were too high.

## Empowering women towards natural birth

Niamh McCabe, consultant obstetrician in Lagan Valley, Northern Ireland, began by quoting her mantra: "Knowledge is power".

Niamh explained how her work was deeply affected by her own experience of childbirth (she has four children). Again echoing elements of earlier talks, she warned that childbirth is being overly medicalised, and that the way to empower women is to give them knowledge. "This is my weapon and will be my epitaph!" she told the conference. "I used to drive the midwives in my unit mad by asking "why?" Why is this woman here? Why is she being induced? And if the answer that you get doesn't make sense to you then you don't go along with it."

Evidence drives Niamh's work, and if there is no evidence that something works – don't do it, and don't interfere if not medically indicated. In fact, Niamh spends quite a lot of her time trying not to do anything at all, particularly when it comes to delivering babies. "Don't look for reasons to interfere," she says. "I think there are very, very, very few women who, if they have the right support, cannot have vaginal births. There are things I hear people say that set my teeth on edge like "once a C-section always a C-section". I have 32 women who have had 2 C-sections and then gone on to deliver vaginally.

In 2002 the Lagan Valley unit where Niamh works had typically high levels of interventions on the labour ward. Since that time, staff have dramatically reduced the number of inductions, caesarian sections, episiotomies and epidurals, all of which have helped to increase previously low breastfeeding rates.

So how has this been done? By extending the "don't interfere unless medically indicated" model to all aspects of antenatal care. For example, not planning too many antenatal visits. "For normal women, stick to 11 visits for first baby and 7 for second, then each of those visits has a point to it. You know why the woman has come, what lab results you should be checking, what health-care information



Niamh McCabe © UNICEF UK 2011

you should be passing to her. This keeps the visit focused. You are not wasting the woman's time and you are not wasting your own time, and you don't miss things.

"With scans, if you scan too much, you find things that are at the lower and upper limit of normal, and because we are trained to do stuff, and are not trained to watch things or monitor, we tend to interfere. So I say only scan a woman when she needs to be scanned. The only two scans for which there is evidence that they work are the dating scan in the first trimester (because then you won't induce her if she has got the dates wrong) and the anomaly scan, which has been shown to lead to a reduction in the number of term babies born with serious congenital abnormalities."

A major cause of unnecessary interventions during birth is induction, which, says Niamh, is often used without proper thought and without medical evidence backing up its use. In addition, women are often induced without really having an understanding of why this is being done to them. "NICE guidelines say you should offer an induction between 41 and 42 weeks, and they say it is ok to discuss alternatives." Doctors must explain to women why they are being offered an induction and what the alternatives are, so that she can make an informed decision.

And sometimes, armed with knowledge, women will rightly decide not to have an induction. Niamh recalls the (admittedly nerve-wracking) case of one woman she looked after who had previously had two Caesarians, but then chose not to have an induction, and in the end went 28 days past her due date before successfully having a normal birth.

Niamh concluded: "It is about teamwork. Let midwives do their thing, they are better at it than me, and if they need me to do my thing, I do it. If there are any doctors out there, then know what you are talking about, and mind your own business. Our business is abnormal, midwives' business is normal. If you have to interfere, be positive – there are worse things in the world than forceps (though they currently escape me!), and always always ingratiate your self with the midwives."

Understandably, this was met with a big round of applause from the conference room, and a question about how to encourage more obstetricians to take this non-interventionist approach. "You've got to get them young" replied Niamh. "And educate them in teams. You need to change the registrars. Junior obstetricians are very good on evidence, and if you know the evidence you can back it up. I don't see why you can't get them, but by the time they are consultants it is too late to change."

# The new standards

Any maternity unit working towards Baby Friendly accreditation will have noticed some changes to the standards they are being asked to implement. With so many changes taking place within the NHS, and much anxiety about cuts and staffing levels, you might wonder if it was really necessary to introduce yet more changes to the maternity standards at this point in time.

This point was addressed directly by Jo Orgles, Senior Professional Officer for the UNICEF UK Baby Friendly Initiative, who presented the newly revised standards at the conference. And she confessed: "When I first heard about the review of the maternity standards I wasn't exactly jumping up and down. 'Why?' I thought. 'We've had these standards for some time, and they seem absolutely fine to me.'"

The first reason for reviewing the standards was to keep in line with International Standards (from WHO and UNICEF globally) which were updated in 2006 and 2009 to keep abreast with the latest scientific evidence. Furthermore, the UK Community Standards had been reviewed in 2008, and it was important to ensure the maternity tool was in line with these alterations. Finally, explained Jo, we needed to confirm that the hospital tool was still fit for purpose in the current climate; was it still a valid and reliable means of assessing best practice?

So what were the changes?

- First came some welcome news: an extra two weeks to ensure that mothers have had a discussion around the management of breastfeeding antenatally. This has been changed to fit in with the scheduling of antenatal appointments.
- Changes to Step 4: longer skin-to-skin contact. The global standard has been changed because evidence showed 30 minutes was an inadequate length of time for most babies to initiate breastfeeding. The new standard will say that skin-to-skin should last for a minimum of one hour or until the first breastfeed.

"I can feel a collective sigh," said Jo. "If you are working in a busy delivery suite, it can be difficult to find more time for extended skin-to-skin contact, but there are benefits to this – for mums, babies and staff. When this works it works well."

- Women are to be given information about recognising and responding to feeding cues, in order to demand feed. Jo added: "This sounds simple, but demand feeding is a really challenging step and old habits die hard. Often when I go to do assessments across the country I talk to mothers and they say they have been told to feed their baby when he is hungry but don't leave him longer than four or five hours. That is not demand feeding!"
- All breastfeeding mothers are to receive information on how to recognise effective feeding before they go home, and an assessment of breastfeeding should be carried out around day 5. Mothers are being discharged much earlier these days and often home visits by midwives can be delayed, leaving mothers with no support. This standard is being introduced because of real concerns that parents may not recognise when the baby is not feeding well and when he is not getting enough milk so that they can seek help. This information needs to be given in writing and verbally before they leave hospital.
- All mothers who are not breastfeeding need to be shown how to correctly prepare formula milk before they transfer home. This has always been part of the hospital assessment, but it has never been a requirement before.
- In the neonatal unit there will be changes to the guidance around offering mothers kangaroo care. The evidence seems to be that expressing 6-8 times per day is probably inadequate, so now mothers will be encouraged to express at least 8 times in 24 hours.
- Assessors will no longer formally assess the use of dummies and teats in the neonatal unit. It is expected that dummies and teats should be avoided whilst

breastfeeding is being established, but it is not a hard and fast rule that they should never be used with preterm babies.

- Women leaving hospital should be given information about sources of support – both national and local. There has been a marked increase in the number of community sources of support – whether telephone helplines, peer to peer support, drop-ins, etc. – and women need to know that they are out there and how to access them.
- There has also been a review of group antenatal education and minimum standards have been introduced. Previously there have been no specific standards for these sessions, except that they should not include routine group instruction on how to prepare bottle feeds, as this normalises bottle-feeding. This has caused lots of misunderstanding over the years, as some staff have interpreted this to mean you can't mention artificial feeding at all. From April onwards there will be minimum standards for the content of these classes and for breastfeeding workshops where these are provided.

Jo then went on to explain specifically how these changes to the criteria would affect the work of Infant Feeding Co-ordinators with the changes in the criteria needing to be put into the policy documents and practice. And the training curriculum will need to include the changes made to criteria, with an emphasis on recognising feeding cues and assessment of milk transfer.

Jo concluded: "The Baby Friendly staff are here to support you. If you anticipate problems then ring us. We will be flexible, we will try to help you and look at timings. If you are not sure what to do or how to do it, or if you are just having a panic, get in touch. We know it takes time to implement new standards and we will do all we can to help you."

For more information on the new standards please see [www.unicef.org.uk/newmaternitystandards](http://www.unicef.org.uk/newmaternitystandards)

# What's good bacteria?

Lars Hanson, something of a legendary figure within breastfeeding research, began very humbly. Thanking his mother for giving him the best start in life by breastfeeding him. Then getting an (unintentional? Those dry Scandinavians...) laugh by continuing "And though it was many years ago, I still appreciate it..."

His talk focused on the importance, alongside breastfeeding, of getting babies colonised with the right microbes. Remember that most bacteria are harmless, and a lot of them are protective, keeping out dangerous microbes.

A mother and baby are one ecologic unit, sharing the same bacteria, the mothers' bacteria helping to protect the baby. Breastfeeding adds to this. Without this, a baby will have trouble controlling its inflammatory capacity, which can lead to necrotising enteritis.

Good bacteria can be found throughout the body, including gut, saliva and vagina. It is also found on the mother's skin. Discussing this, you can see the risk of

caesarean sections, as the mothers' bacteria is not necessarily passed on. More use of antibiotics during this time can impair the take-up of good bacteria along with protecting against bad bacteria. Formula-feeding can also have trouble with passing on the right bacteria.

"This makes me very happy" he said, introducing a slide of skin-to-skin, which is another way to pass on good microbes and antibodies. He described how antibodies are passed on during pregnancy via the placenta and the complex mix of antibodies (and anti-antibodies) that make up our immune system. But breastmilk and secretions provide something different.

In the lining of the gut we have cells that produce secretory IGA. Any microbe that comes into the gut will meet these antibodies and it will be neutralised. But there are also special cells that bind the bug and bring these cells to the mammary glands so that the milk will contain antibodies against all the bugs she has ever had to protect the baby, who is

exposed to microbes immediately after birth. And we are talking a lot of antibodies, even small amounts, such as can be found in colostrum.

Being delivered, like all mammals, next to the anus, is a crucial way to get these bacteria. If we regard the newborn as immunodeficient, we can see natural birth and milk as being crucial interventions to help protect it.

He moved to conclude with "something we're working on..." a new protein discovered in milk that prevents mastitis. Pakistani mothers in villages have very high levels of this protein and never have mastitis. They also found this structure was very efficient against diarrhea. No firm conclusions have been drawn yet, but it shows how much we still have to learn about breastfeeding.

Babies need food and protection, and the mother, through breastmilk, can provide both. "Breastfeeding is a remarkable system. It's how we survived."

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## Baby Friendly Initiative Conference 2011 – Booking open

The UNICEF UK Baby Friendly Initiative's conference offers a mixture of innovative, entertaining and challenging presentations on a wide range of issues associated with supporting successful breastfeeding.

Booking is now open for this year's conference, which takes place on 24-25 November at the BT Convention Centre in Liverpool.

### Speakers include:

#### Carrie Longton, Co-founder

**Mumsnet** – 'Mumsnet and feeding: what are women talking about?'

#### John Carnochan, QPM, Head of the Violence Reduction Unit, Scotland

– 'Early years care and its effect on crime'

#### Anne Milton, Parliamentary Under Secretary of State for Public Health (Department of Health)

#### Robin Balbernie, Consultant Child & Adolescent Psychotherapist at Gloucestershire Children & Adolescent Mental Health Services

– 'Circuits and circumstances – Brain development'

#### Julianne Harlow, Senior Lecturer in Specialist Community Public Health Nursing, University of Bolton

– 'Training health visitors'

#### Janette Westman, Infant Feeding Lead, Bradford Royal Infirmary and Helen Ball, Professor of Anthropology and Director, Parent-Infant Sleep Lab

– 'How do parents really care for their babies? – Results of the Bradford Infant Care Study'

#### Prof. Mary Renfrew, University of York

– 'Baby Friendly – Mother Friendly'  
**Paula Meier, RN, DNSc, FAAN, Director of Clinical Research and Lactation, Special Care Nursery** – 'Optimising breastmilk' and 'Peer support for neonates'

#### Sue Henry, Infant Feeding Co-ordinator, East Lancashire Hospital Trust and Helen McIlroy, Breastfeeding Co-ordinator, Royal Jubilee Maternity Services

– 'Antenatal information giving'

Prices are £210 for both days (£190 with discount) or £120 for a single day (£110 with discount). Discount applies when booking five or more places if booking before 31 July 2011.

Go to [www.babyfriendly.org.uk/conference](http://www.babyfriendly.org.uk/conference) to find out more

# Neonatal care – A new frontier

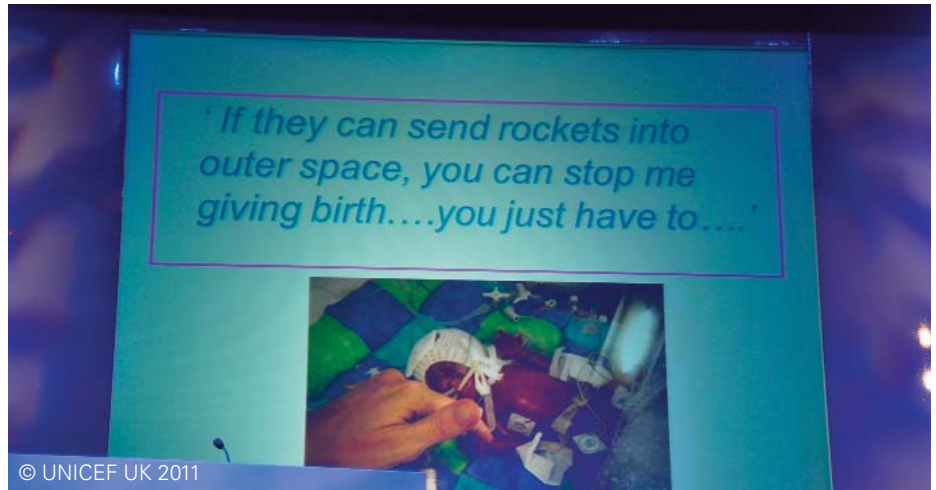
For sick and preterm babies the importance of breastmilk and breastfeeding becomes even more profound as Carmel Duffy and Liz Jones showed in their moving talk at conference.

“The more you delve into this subject, the more you realise how crucial breastmilk is for pre-term babies” said Carmel. It is not only the unique, individually personalised nutritional content of breastmilk that is so important to premature babies, but also the anti-infective and developmental properties of human milk which have been shown to be highly beneficial to help with growth and protection of preterm babies, to the extent that its use is linked to reductions in mortality and morbidity.

For mothers with babies in the neonatal ward, being able to provide breastmilk for their child enables them to make a unique and invaluable contribution to their care. Many mothers report that being able to do this simple yet extraordinary thing helps them to overcome feelings of helplessness and isolation. “We need to empower this woman” said Liz Jones “We need to turn this woman from a victim to a powerful team member.”

However, despite the numerous and sometimes life-saving advantages of breastmilk, its use is low in neonatal intensive-care units in the United Kingdom.

It need not be this way. The Children’s Hospital in the University of Uppsala in Sweden, who has introduced parent-led kangaroo-care for preterm infants in her hospital in Uppsala, Sweden. In this highly successful model, parents and siblings of premature babies literally move into the purpose-built unit and are supported by staff to give 24-hour kangaroo care to their babies. Parents and pre-term infants are kept together at all times, and parents encouraged to become the baby’s primary carers – practices which over the years have been shown to encourage exclusive breastfeeding, and lead to earlier discharge times of one month less than conventional neonatal units.



It may feel like the Uppsala model is a different world, and would never work in the UK, but things are beginning to change. In October 2010 NICE published a Specialist neonatal quality care standard which stated that mothers of babies receiving specialist neonatal care should be supported to start and continue breastfeeding and to receive expressed breastmilk. The BLISS Baby Charter standards and the Toolkit for high quality neonatal services all stress the importance of breastmilk and breastfeeding within neonatal services.

In response to this The UNICEF UK Baby Friendly Initiative has recently developed a breastfeeding and lactation management course aimed specifically at neonatal staff. The course takes place over three days with additional time required to complete a series of practical skills reviews which will help participants on the course link theory to practice within their workplace. Why develop such a course because, as Liz Jones put it, “initiating and sustaining breastfeeding and milk supply for mothers of premature babies is incredibly difficult. They have emotional impacts on their milk supply, their breasts are immature and long-term pumping is not to be sneezed at – but it is so important that they succeed.”

Designed as a standalone course it incorporates normal physiology and management of breastfeeding, so that staff understand normal processes before they can appreciate the impact that premature birth and/or illness can have on this. The importance of breastmilk and

breastfeeding are explained in terms of health benefits, together with information on constituents of breastmilk, donor milk and infant formula.

The importance of early, frequent and effective breastmilk expression is discussed and those taking part in the course will be encouraged to explore the various techniques used for maximum success. Participants will also learn how to achieve the best possible nutrition from expressed breastmilk by using simple methods to improve the fat and calorific content of expressed breastmilk.

Other important topics such as feeding development, the importance of kangaroo care and overcoming challenges faced by mothers and babies are also covered within the main body of the course.

The course has aimed to adopt a family centred approach to care provided by neonatal units within the UK and throughout its development there has been a strong emphasis on hearing the real life stories of women and families who have first hand experience at the receiving end of this care. Extracts from the video interviews with mothers were shown to delegates “We believe it’s a really important course” said Carmel “and we hope it’s going to make a real difference to practice in neonatal units.”

For further information on the new Baby Friendly neonatal breastfeeding course please visit the Baby Friendly website: [www.babyfriendly.org.uk/training](http://www.babyfriendly.org.uk/training)

# In the right frame of mind

“What’s very interesting about oxytocin” began Christina on day two “is that it acts as a hormone and as a neurotransmitter. As a hormone we talk about it in terms of love, labour and lactation, but it also has many, many other effects on other organ systems.”

She went on to explain that, in the birth context, its primary role was to promote both lactation and infant survival. Oxytocin has many varied benefits, having different effects because of the different sites where it works, which can seem contradictory. For example, when a mother sits down to feed, she wants something to drink because oxytocin has made her thirsty. But when she feeds for the first couple of weeks post-partum oxytocin can then also make her groggy as it releases insulin.

And it affects us all. We get it from warmth, touch, neurosensory cues, affection, relationship and feeding. Under the influence of oxytocin, you get more stroking, breastfeeding and increased tolerance for monotony.

And infants also have oxytocin. It promotes better digestion, through release of cholecystokinin, in response to suckling.

So, Christina pointed out, if both mother and baby are getting it, you have a synchrony where both are in a “right-brained” mode. She did remind the audience that its not fair to talk about one person being either/or, because we have the corpus colosum which connects both sides. One might be dominant at different times in difference circumstances.

This, Christina expanded, is why postpartum mothers don’t quite follow things very well. It was called “cognitive deficit” in first study 20 years ago, but its actually more of a left-brain deficit and this is an effect of oxytocin. To be in right-brain limbo gives mothers a sense of insecurity and they seek out left-brain commands, even though they can’t process it as well. The mother wants to write it all down and try and be busy. Meanwhile, her right

brain is very active and, at this time, she remembers words with strong emotional connections.

Christina illustrated this by telling the audience that she was premature “so small they didn’t even weigh me.” Prior to her birth, she’d had a brother who died aged four-and-a-half, and the medical staff kept saying to her mother “all she’s gotta do is grow”. Her mother never forgot these words, remembering them even in dementia.

**“(Babies) do not learn by being left to cry, they learn by being soothed.”**

Our right-brain is attending to body language and tone of voice and taking those things in even when the left-brain loses track of time and is all over the place. Christina mentioned to watch for the phrase “that makes sense” when talking to mothers because that indicates it has resonated with her right brain. It means something has been resonated with the hard-wiring in the right-brain about how things should be.

Babies have no real left-brained action until about 3 years old when they begin to work in more symbolic language. The right brain remains dominant until late childhood / adolescence, living in the moment.

Mothers being right-brain dominant helps them communicate with their baby, “because you can’t say to a baby ‘just a minute’”. You have to live in the moment, just like a baby does.

Allan Schore, the neuropsychanalyst, has put together a model that describes the mother-baby relationship and developed the concept of affective synchrony. He noted how mothers and babies have these interactions of eye-to-eye contact and simultaneously vocalising and responsive interactions with subtle movements connecting them. Having

these actions affects their own brain, particularly the very primitive area where emotions and memory are laid down. By way of this intuitive interaction we get a direct right-brain communication which is linking their limbic systems and allowing a mother to help a baby regulate her own state.

The infant’s immature and developing homeostatic systems are co-regulated by the mothers more mature and well-regulated nervous system. This allows him the capacity to adapt to his new world by watching how his mother adapts and his stress-coping abilities.

In a passage that seemed to resonate with delegates, she said “We don’t have to be perfect. When the baby gets upset and then gets calm, the baby learns distress is not permanent, that it can be solved. It is laying down the neural pathways to self-soothe. They do not learn by being left to cry, they learn by being soothed. If you’re raised in an environment where distress is not solved, it can lead to later behavioural and parapsychiatric issues.”

The mother’s right brain is dominant for a reason, it allows them to live in the moment. “It’s as zen as you’re ever going to be.”

In conclusion, for health professionals, the lesson is that we need to watch the emotional content of what mothers are saying to us, their body language and what we’re saying to them. We want to model positive interactions, rather than just tell them. “When I send mothers away it’s always with the caveat that the handouts are just a start, just guidelines, that this is where it starts and I want her to feel free rather than just working hard on something I told her to do.” The key is for the mother to start trusting her instincts and health professionals needs to reinforce that. “Let the mother know that you like her. When she feels liked, she’ll feel more able to do those sort of things. When you feel you have nothing to offer, liking her goes a long way.”

## Starting solids – Let's trust the baby

Carol Williams now seems eerily prescient in her topic, given the media storm that erupted over the age at which to introduce solids in January. She began with reiterating the official recommendations: continued breastfeeding up to two years and appropriate complementary foods from around six months onwards. But when *do* mothers introduce solids? Data from the 2005 Infant Feeding Survey shows that 51% introduced solids before 4 months. What are the implications of this? And does it really matter?

In her work with BfN, she asked people why mothers introduced solids earlier and the answers were the familiar ones – “not sleeping at night”, “what I did with other children”, “he’s watching when I eat”, “fists in mouth”, slower growth rate, etc.

“I don’t like the term weaning, because we’re not clear what it means.” In English, its combined into meaning both “off the breast” and “onto solids”. The WHO uses the term “complementary feeding” – foods being given in addition to breastmilk / formula. And its complement as in “make complete”, topping up the nutrients from breastmilk and formula. Top up, not push out.

So when should this begin? Carol identified five ways to look at it:

**Developmental readiness** – More space develops in the oral cavity, tongue develops skills to do more than suckle or suck, the gag reflex moves. On this basis, the advice in the Start4life leaflets is accurate and that this appears around six months.

**Ability to digest and tolerate solid foods** – Young babies cannot digest solid food or excrete properly. Babies are surprisingly robust though. In the 18th century, the advice was that solids shouldn’t be introduced until 18 months. In 1953, it was two days! “My sister was on baked beans at two weeks.....and she’s fine.”

**Health costs of introducing solids** – Unnecessary exposure to potential pathogens and allergens. The change to 6 months, when introduced, was said by critics not to be relevant to developed countries. However the recommendation was based on research from the USA which suggested that the extra 2 months quartered the risk of ear infections and halved the risk of pneumonia. The Millennium Cohort Study also showed a link between introduction of early solids and obesity (as well as breastfeeding).

**Nutritional disadvantages of giving other foods too soon** – The early introduction can displace breastmilk in the food plan by making the baby fuller on high-calorie, low-nutrient foods and having them take less breastmilk. Sometimes, the earlier nutrient intake can drop because the first foods are fruit and other low-calorie typical “first foods”. There is also some evidence that whereas these foods can displace breastmilk for a breastfed baby, they will be taken in addition for the formula-fed baby, who can be conditioned to take extra feeds.

**When breastmilk or formula milk alone is not sufficient.**

Once they start, how much do they need? The FAO and WHO in 2004 reviewed energy requirements, as did SACN in 2009, using the same data. The new RDAs for calories for 6-24 months are around 18% less than original 1994 COMA reports. If the purpose is to “top up” then the energy gap has shrunk. When we start, we don’t have to pile in as much as we thought was needed.

It does mean that when we first start solids it should be an opportunity about exploring food and tastes, rather than trying to meet the calorie needs.

What does developmental readiness look like? Carol presented some videos showing babies of various ages trying out solid foods for the first time. This was a great opportunity to see babies trying out solids and recognise the differences.

Carol helped to point out and highlight the signs. “I’m not showing you good practice, I’m just showing you what I found on Youtube!”

The important point was made that the principles about introducing solids was as true for formula-fed or mixed-fed babies as it was for breastfed babies, since formula is designed to be a complete food up until 6 months of age.

When it comes to putting it into practice, what are the important messages? The prime aim is nutrient-rich foods, not calorie-rich foods. The most important nutrient gaps are iron, zinc and vitamin D. This brought us to the elephant in the room – how concerned should we be about iron?

USA and Canada recommend starting with iron-rich foods, should we be doing the same? Carol explained that babies body stores plus breastmilk are usually enough to meet iron needs for the first six months. From 6-9 months there’s enough to prevent anaemia, but babies may tend to have low iron stores. SACN in 2009 looked at iron requirements and said there was a lack of data on the iron needs of 6-24 months olds. We also know that babies at 6-9 months have immature iron regulation mechanisms and if you give them too much iron they can absorb too much. Iron stores may be low, but they are not anaemic. The notion of the iron gap is being exploited to sell formula and its not based on evidence.

Carol concluded by calling for us to get the language right, there’s no rush to rush and remember that developmentally 6 months is very different to 4 months. “Let’s have guidance on the safe sharing of family foods, on the differences between gagging and choking and build on not just the nutritional needs around introducing solids, but around how it works with helping a baby develop. Introduction of solids is a developmental milestone and we just need to be ready when the baby is.”

# No laughing matter

Jim Paterson's opening gambit, a confession of guilt that he was unable to breastfeed, set the tone of his hilarious and upbeat talk. He had some very important messages to deliver about the role of commercial marketing of formula milk and how it contributes to women deciding not to breastfeed. After a whistlestop tour of how the Industrial Revolution sucked women from their homes into factories, leaving a vacuum in the family and unraveling the small-scale networks that allowed mothers to nurture their babies, Jim went on to show how even today, the power of commerce has such a huge effect on our most basic instincts – to the extent that we struggle to convince people that human milk is best for human babies.

Whilst advertising today is not as simple as showing images of happy babies sucking on bottles of formula milk (in fact, such images are illegal), formula companies spend millions of pounds annually on almost subliminal, below-the-radar awareness campaigns to make consumers associate their product with good health. We do not look at an advert and repeat it verbatim, but we unconsciously store information about where we see products and what they are associated with and these go on to influence our choices.

This is why, said Jim, when people ask Baby Friendly why they can't show adverts in hospitals, the answer is because advertising in a health-care facility increases the potency of the advert through location and association with health professionals. Equally, if midwives or health visitors carry pens or notebooks with a company's logo on it, this apparent endorsement of the company by an authoritative figure leads to a sense that their products must be beneficial to health. These associations also take place at study days. Jim then quoted from a PR director describing their tactics to get midwives to endorse one brand of formula milk by producing non-branded content for continuous professional development and establish a positive link with the brand.

It took the emergence of the well-documented links between formula milk and infant mortality and illness for the dangers to be more widely recognised and for public policy to more strongly endorse breastfeeding and restrict formula advertising. But the loophole in these laws was allowing follow-on formula to continue to be advertised as that acted as a general advertisement for the company's products. The importance of continued advertising was illustrated in the story of PBM formulas and their lawsuit against Mead Johnson, who used false advertising and claims to maintain their position in the market. Without advertising, the "premium" brands were threatened by store brands, etc.

Jim began the second day by recalling that one of his first acts for Baby Friendly Initiative was to set up news alerts to keep an eye on what was happening in the media. Through this, he developed an understanding of how a story can develop and run in the media which he applied to the story about the Norwegian study of January 2010 that claimed there were no real benefits to breastfeeding. The curious thing about this claim (which grabbed most of the headlines) was that it came from a small review attached to a piece about the effect of testosterone. But it was front and centre of the press release that was sent out. A cursory glance over the research would have shown that this was of no real consequence, but the piece made headlines around the world. Why was this?

Jim quoted from Ben Goldacre's *Bad Science* on how journalists often run press releases verbatim, without necessarily checking the facts first. Furthermore, health journalists were often not *health* journalists, as in they did not have a background in health research and evidence. Goldacre explains the creation of a popular narrative about how health research works earlier in the 20th century does not work in the modern age, where research discoveries are incremental and "eureka" moments do not come out of the blue as much. These nuances are

often lost in health reporting, leading to perceptions that each new piece of "evidence" changes what has gone before. Jim then deconstructed how the Norwegian story was reported in the Daily Mail to show how each story is systematically put together according to a set formula and incorporating the attitudes and voice of the media source.

The conflict and messaging around breast and bottle was outlined and the recurring messages and the false perceptions they create were looked at. And it makes it difficult for those of us who want to support breastfeeding to move out of being defined as being "on a side." Jim looked at other factors that effect the debate – media portrayal of women, the judgement of mothers' decisions, celebrities – all of which helped shape the world in which we must work.

Jim then moved on to look at social media and its impact at distilling information and news to us. The right link on Facebook and Twitter can circumvent traditional media sources and hit thousands upon thousands of followers. Jim quoted extensively from the Caroline Walker Trust report on perceptions of formula milk and related discussions amongst mothers on social media networks. The report showed that these mothers preferred the advice of their peers, who had been there and done it, to health workers. Furthermore, formula companies websites were often used as reliable sources of advice. Reading some transcripts of online debates amongst mothers, the content of which, filled with inaccuracies and passages straight from the marketers' mouths, had delegates gasping.

We could not help but feel threatened by the end of the talk, with the perception of a world where the media and social media shut out accurate, impartial information. But Jim was determined to finish with a positive call to arms, and reminded delegates of the power they held to help mothers and how they had "the best stories to tell – anyone who wants to take you on should tremble."

# Whether breastfeeding or bottle-feeding, women need to support each other

Jim Paterson's description in his talk of how breastfeeding stories were reported in the news was given a perfectly fitting real-life example in February when an article (not a research paper) arguing that breastfeeding for six months should be reviewed made headlines and TV news across the country. Although it was not an official piece of research and official policy remains the same, the same depressing ritual of "breast vs bottle" was played out in the media and on the web.

Motherhood can be one of the most intensely rewarding experiences of a woman's life, but without a doubt it presents some of the most difficult challenges. This has always been the case, but it seems that in recent years we women have chosen to add to the insecurities and dilemmas facing modern mothers by pitting mother against mother in what has become no less than a mud-slinging match over how we choose to feed our babies.

Enough is enough. In the first two months of this year alone there were stories of breastmilk icecream, claims about when to introduce solid food and reports of women feeling bullied in hospital, all of which have fired the starting gun on yet another frenzy of accusations for and against breastfeeding and bottle-feeding. The vitriol and language used in some of these attacks, on either side, is a sad reflection of how judgemental we have become in the arena of feeding a baby.

In saying this, we must lay our own cards on the table. As a world leader in promoting and protecting breastfeeding UNICEF remains steadfast in its belief that human milk is best for human babies and the evidence overwhelmingly supports this view.

Yet we also accept that mothers – like any other member of the human race – make choices based on weighing up the costs and benefits to their babies, themselves



and their wider families, and that having done this, some mothers will choose not to breastfeed. Others will not have a choice. There will be barriers, physical, social or cultural, which prevent them from ever having the opportunity to choose breastfeeding.

Whatever choice they make, the vast majority of mothers want the best for their children, and inflicting guilt and judgment on one woman because of the choice she made (and this happens both ways, for bottle or breastfeeding), leads to division, anger and isolation at a time when new mothers need the support of other women more than ever. Having accepted a mother's choice, we should care for and nurture the mother-baby unit through the first few months to the very best of our abilities.

So, should we just sit back and accept the status quo? That some mothers will choose breastfeeding and some bottle-feeding, and they should simply be left to it?

Well, no. Because of those mothers mentioned earlier who never get to make a choice. Because so many women who thought they were choosing to breastfeed didn't get the help they needed to get going without pain or to establish a sufficient supply of milk. Or because no

one respected them enough to cut through the clever subliminal advertising of formula companies which undermines women's confidence in their own mothering abilities, to give them accurate, impartial information about the differences between breastmilk and formula milk.

We owe it to every mother, now and in the future, to make sure that health professionals are properly trained in how to establish pain-free breastfeeding, and to make sure the legislation is in place to remove obstacles that would prevent women choosing to breastfeed.

At the same time, and equally important, we have to end this polarisation of mothering. We need to support and value the incredible and unique role that all mothers have in nurturing their offspring, rather than allow this division to continue whereby women fall into one of two camps each one accusing the other of being judgmental and bullying.

It is not a competition and there are no Oscars being presented for the 'best mother' role. Mothers throughout the world have always strived to do the best they can in sometimes very difficult circumstances and with very little recognition. Women should stand alongside each other in appreciation of that.

# Baby Friendly Initiative Awards 2010

**83 Certificates of Commitment showing a breastfeeding policy is in place and that an action plan to go Baby Friendly is in place.**

Whittington Hospital NHS Trust  
Shropshire Surestart & PCT  
NHS Calderdale  
St Georges Hospital  
Mid Staffordshire Hospitals NHS Foundation Trust  
Kirklees Community Health Care Services  
Blaenau Gwent Health Visiting Service  
South Warwickshire General Hospitals NHS Trust  
South Eastern Trust (North Down & Ards Sector)  
South Staffordshire PCT  
North Staffordshire Community Healthcare,  
Newcastle and Staffs Moorlands Children's  
Centres and Community Health & Learning  
Partnership  
Portsmouth City Teaching PCT  
University of Salford  
Coventry University  
Mid Cheshire Hospitals Trust (Leighton Hospital)  
Northampton General Hospital Trust  
Oxford County Council Children's Centres  
Yeovil District Hospital  
Somerset Community Health  
University Hospitals of Leicester NHS Trust,  
Leicester City PCT, Leics. County & Rutland PCT  
Bedfordshire Community Health  
Gateshead Foundation Trust  
Kingston Hospital Trust  
Uni of West of England  
Warwickshire Community Health &  
NHS Warwickshire  
NHS South Gloucestershire  
NHS Great Yarmouth & Waveney  
Ashford and St Peter's Trust  
York Hospitals Trust  
London South Bank University  
Hampshire Community Health Care  
Weston General Hospital  
Whipps Cross University Hospital NHS Trust  
Bedford Hospital NHS Trust  
The Lewisham Hospital NHS Trust  
City Hospitals Sunderland  
Sunderland PCT and Sure Start Children's  
Centres Sunderland  
Basingstoke & North Hampshire NHS  
Foundation Trust  
NHS County Durham and NHS Darlington  
County Durham and Darlington NHS  
Foundation Trust

NHS Gloucestershire Care Services  
NHS Halton and St Helens  
NHS Fife  
Blackpool Victoria Hospital  
NHS Islington  
NHS Doncaster  
NHS Dumfries & Galloway  
De Montfort University  
Princess Alexandra Hospital NHS Trust  
The Rosie Hospital, Cambridge University  
Hospitals NHS Foundation Trust  
Newcastle Upon Tyne Hospitals NHS  
Foundation Trust  
Shrewsbury & Telford Hospital NHS Trust  
Central London Community Healthcare  
(Kensington & Chelsea)  
Liverpool John Moores University  
Burton Hospital NHS Foundation Trust -  
Queen's Hospital  
University of Hull  
Newcastle Children's Trust  
NHS Camden  
NHS North Somerset  
NHS South West Essex Community Services  
NHS South East Essex  
Southend University Hospital NHS  
Foundation Trust  
St John's Hospital, Lothian  
NHS Devon  
Western Sussex Hospitals Trust  
Croydon University Hospital  
Taunton and Somerset NHS Foundation Trust  
Lincolnshire Community Health Service  
NHS Derby City  
Croydon Community Health Services  
NHS Westminster  
NHS Trafford  
Community Services Bury (NHS Bury) and Bury  
Children's Centres  
Scarborough and North East NHS Trust  
NHS Bromley  
NHS Central Lancashire  
NHS Sefton and Children's Centres  
NHS East Riding of Yorkshire  
Surrey Community Health  
NHS Brent  
Diana Princess of Wales Hospital  
North East Lincolnshire Care Trust/Community  
Services

## **35 Stage 1 awards showing the required mechanisms to enable the breastfeeding policy to be implemented and maintained are in place**

NHS Dumfries & Galloway Maternity Hospitals  
Bournemouth University  
Worcestershire PCT and Children's Centres  
NHS Ayrshire & Arran  
Dudley PCT  
Rotherham PCT  
Shropshire PCT  
Wiltshire Hospitals  
Bolton University  
Ulster Hospital  
Guys and St Thomas' Hospital  
Torbay - South Devon Healthcare Trust  
Warrington PCT  
NHS Calderdale  
South Eastern Trust (North Down & Ards Sector)  
Brighton & Sussex University Hospitals Trust  
Friarage Hospital  
Heywood, Middleton & Rochdale PCT  
Frimley Park Hospital NHS Foundation Trust  
Stoke on Trent PCT  
St Georges Hospital  
Chelsea & Westminster Hospital NHS Foundation Trust  
Somerset Community Health  
NHS Plymouth Teaching PCT  
University of Greenwich  
Torbay Care Trust  
Yeovil District Hospital  
Weston General Hospital  
Bedfordshire Community Health  
Wirral PCT  
Liverpool PCT  
University of Chester  
Solihull NHS Care Trust  
Great Western Hospital, Swindon  
North Staffordshire Community Healthcare

## **10 full awards showing that standards are being implemented for all pregnant women and new mothers**

Royal Jubilee Hospital, Belfast  
Bristol PCT  
Gold Sure Start  
Southern Sector of the Western Trust  
Erne Hospital NI  
University of Wolverhampton  
Salisbury District Hospital  
Oldham Community Health Services, Oldham PCT  
Countess of Chester Hospital  
Singleton Hospital

## **41 Stage 2 awards showing that staff knowledge and skills on breastfeeding meet the standards**

Tower Hamlets PCT  
Royal Bournemouth Hospital  
West Middlesex University Hospital  
Ninewells Maternity Hospital, Dundee  
Central Surrey Health  
St Marys Hospital, Manchester  
Dorset County Hospital  
Royal Wolverhampton Hospitals  
Stockport NHS Foundation Stepping Hill Hospital & Corbar Birth Centre  
NHS Telford & Wrekin, Community Services and Sure Start Children's Centres Telford  
NHS Blackburn with Darwen  
Wishaw Maternity Unit, Lanarkshire  
Blackpool PCT  
Cwm Taf (North) Community Service  
Armagh & Dungannon Locality Southern Health and Social Care Trust  
Barnet and Chase Farms Hospital Trust  
Liverpool Women's Hospital  
Fairfield Hospital & Rochdale Infirmary  
East Renfrewshire CHP (Gtr Glasgow)  
Wythenshawe Hospital, University Hospital  
South Manchester NHS Trust  
Inverclyde CHP (Gtr Glasgow)  
East Dunbartonshire CHP (Gtr Glasgow)  
Barnet and Chase Farm Hospitals NHS Trust  
Gloucester Royal Hospital & Cheltenham General Hospital  
South Manchester PCT  
South East Glasgow CHP  
Renfrewshire CHP  
Cornwall and Isles of Scilly PCT  
NHS Peterborough  
South West Glasgow CHP  
North Glasgow CHCP  
Harrow PCT  
Torfaen Health Visiting Service  
Abertawe Bro Morgannwg UHB - Bridgend, Neath & Port Talbot  
Royal Devon and Exeter NHS Foundation Trust  
West Dunbartonshire CHCP  
North Down and Ards Sector of South Eastern Health and Social Care Trust and Ards Sure Start  
Mid Highland CHP  
North Highland CHP  
Good Hope Hospital  
West Glasgow CHP

## **Eight re-accreditations show that the standards have been upheld**

Arbroath, Montrose and Perth, NHS Tayside  
Down Lisburn  
Inverclyde  
St Michaels, Bristol  
Derby City General Hospital  
Bridgeton Health Centre  
Northern Health and Social Care Trust, Homefirst  
Community Legacy Trust  
Altnagelvin Hospital

# Run baby, run!

Why not get fit and focused by joining Team UNICEF in the Royal Parks Foundation Half Marathon on 9th October 2011. UNICEF is one of four Golden Oak charity partners in this beautiful race that takes you through the royal parks and past famous London landmarks.

UNICEF will provide you with:

- A fundraising pack full of fundraising ideas and training tips
- Much-needed refreshment, lunch, exclusive goody bag, and a big thank you after you cross the finish line at our UNICEF marquee!
- Access to UNICEF online sponsorship facility My Fundraising



Eder Maghalhes soaks up the support for the UNICEF cheering squad!  
© UNICEF UK / Isabelle McKay-Smith

Until the end of June we have halved the registration fee, so it is now just £15 to sign up to join the team! Also if you encourage a friend to sign up too you will be in with a chance to win a £150 holiday voucher!



To find out more about the event and to register online today, visit: [www.unicef.org.uk/halfmarathon](http://www.unicef.org.uk/halfmarathon). Email [halfmarathon@unicef.org.uk](mailto:halfmarathon@unicef.org.uk) or call our helpdesk on 0844 801 2414.

## Infant milks in the UK – New report

This Caroline Walker Trust, an organisation that publishes research and guidelines around public health and nutrition, has published a new report on infant formula. The website states that the report “summarises the composition of infant milks currently available in the UK. The report provides information about the current regulations for infant milk, looks at how well they are monitored and highlights some of the issues relating to how evidence is compiled to make compositional or other claims. The aim of this publication is to stimulate the relevant health departments and other professional bodies in the UK to provide updated objective information to health professionals that will allow them to advise parents and carers appropriately.



You can download the report at [www.cwt.org.uk](http://www.cwt.org.uk)

## New course dates

### Project Management

13-14 July, 5-6 October. £395 each

### Breastfeeding Management

7-9 September, 27-29 October  
£380 each or £345 for 5 or more

### Train the Trainer

14-16 September. £680 each

### Audit Workshop

5 July. £250 each

### Breastfeeding & Lactation Management for Neonatal Staff

27-29 July, 28-30 September. £380 each or £345 for 5 or more

All courses held in London

Contact us at [bfi@unicef.org.uk](mailto:bfi@unicef.org.uk) to find out more or visit [www.babyfriendly.org.uk/training](http://www.babyfriendly.org.uk/training)

# A big first for Bolton

There was reason to celebrate at The University of Bolton in May, when their Health Visitors programme was accredited as Baby Friendly - the first university in the country to achieve the award.

Bolton initially agreed to pilot the assessment of a health visiting course in 2009. Several midwifery courses have been accredited since the university standards were first introduced but no such programme existed for Health Visitors.

Lead UNICEF UK assessor Carmel Duffy, herself a former health visitor, said: "This is really wonderful news. Bolton has put in such a lot of work to bring this about. Whilst the standards themselves are not difficult, many different stakeholders have to be

brought on board to make this work, and staff at Bolton should be very proud of themselves."

Julianne Harlow, senior lecturer at Bolton University, led the process of ensuring the course met Baby Friendly standards. She explained: "Having been a midwife and health visitor myself I was aware that perhaps not all health visitors are fit for practice. When I qualified in 2000 the breastfeeding training was minimal – I was just told to have a look at a CD Rom in the library."

"I breastfed my own children and decided it was an area that I wanted to make some improvement to when I started teaching at Bolton. It is a very short course, and some universities say this is why they can't

fit in any more breastfeeding training, but we didn't find that a problem.

Sue Ashmore, Programme Director of the Baby Friendly Initiative, said in her presentation speech 'What is special about this award? What makes Bolton different from the rest?'

'You actually went out and did it. You rolled up your sleeves and just got on with it, overcoming problems and obstacles along the way. You are now the benchmark, people now have to follow you – Bolton has done it first.'

Julianne will be speaking at this year's Baby Friendly Initiative annual conference on the process of becoming the first accredited health visiting course.

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## Oldham PCT accredited as Baby Friendly

Great news in Oldham, when the PCT became only the second in England to achieve Baby Friendly status. This also makes it the second Baby Friendly city in the UK, with Royal Oldham Hospital having been Baby Friendly since 1999.

Oldham has introduced several interventions to promote breastfeeding. Baby Bistros were introduced in 2003. These sessions provide mums with support, advice and information from qualified infant feeding advisors and other mums in an informal setting. A Breastfeeding Friendly Oldham Directory has also been developed which lists venues across Oldham that welcome breastfeeding mums. Sue Ashmore, Director, UNICEF UK Baby Friendly Initiative, said: "This is a truly fantastic achievement by everyone at Oldham PCT. I know it has taken a huge amount of energy and determination by those involved, but the reward for mothers and babies across Oldham will be great."



Left to right: Les Coop, chair of OCHS sub-committee; Sally Hamer, health visiting team leader; Shauna Dixon, NHS Oldham chief executive; Lois Royals, breastfeeding support worker; Joanne Mayall, infant feeding advisor; Sue Ashmore, UNICEF UK Baby Friendly Initiative Director; Lisa Chalmers, health visiting team leader; Ruth Trickett, health visiting team leader; Ruth Ramsbottom, health visiting team leader; Alan Higgins, director of public health for Oldham.

# Research round-up

## Teenager's decisions about infant feeding were found to be based on what they perceived to be morally acceptable

A study was carried out to examine the psychosocial factors influencing infant feeding intention among pregnant teenagers expecting their first baby and living in deprived urban areas in England. The study used a quantitative questionnaire based on the Theory of Planned Behaviour in order to identify which variables were the most important in influencing feeding intentions. Focus groups then provided insight into the meaning of these variables for white pregnant teenagers living in a northern English inner city. The researchers found that breastfeeding was viewed as a morally inappropriate behaviour by most of the teenagers, with formula feeding being perceived as the appropriate behaviour. They conclude that existing breastfeeding promotion activities are likely to continue to fail to reach teenagers experiencing deprivation in England in the absence of effective strategies to change the underlying negative moral norms toward breastfeeding.

Dyson L, Green JM, Renfrew MJ et al. (2010) *Factors influencing the infant feeding decision for socioeconomically deprived pregnant teenagers: the moral dimension*. *Birth*; 37: 141-9.

## SRI treatment for postnatal depression impacts on breastfeeding success

A study was carried out to determine the relationships between major depressive disorder and depressive symptoms during pregnancy and use of serotonin reuptake inhibitor (SRI) related to breastfeeding intention and breastfeeding status at 2 and 12 weeks. Women were followed prospectively from pregnancy through to 12 weeks postpartum for infant feeding intention, feeding practices and depressive symptom severity. At enrolment, 23% had major depressive disorder, 21% had significant depressive symptoms, and 16% were taking an SRI. Neither major depressive disorder nor depressive symptom severity in pregnancy was related to breastfeeding intention, initiation or duration at 2 and 12 weeks. Intention to exclusively breastfeed was the most significant predictor of breastfeeding initiation and duration. However, SRI use in

pregnancy and at 2 weeks postnatal was negatively associated with breastfeeding outcome. The authors conclude that pregnancy is the optimal time to intervene to increase breastfeeding rates.

Bogen DL, Hanusa BH, Moses-Kolko E et al (2010) *Are maternal depression or symptom severity associated with breastfeeding intention or outcomes?* *J Clin Psychiatry*, June 2010, 1555-2101

## Relationship between bed sharing and breastfeeding: Longitudinal, population-based analysis

The potential risk associated with bed-sharing and sudden infant deaths has led many health professionals to recommend parents to never take their infants into bed with them. In a previous paper, the authors have reported this might lead some parents to adopt more hazardous nighttime infant care practices, such as sleeping on a sofa. This study investigates the longitudinal patterns of bed sharing, the characteristics associated with those patterns, and the relationship with breastfeeding using an established longitudinal cohort of parents and their children monitored from birth in Avon, England, since 1991.

The study used prospective, population-based data to investigate nocturnal bed sharing at 5 time points from birth to 4 years of age. Of 14,062 live births, 7447 (53%) had data available for all time points. Incomplete data from the remaining respondents followed similar trends. Postal questionnaire information was collected on sleeping practices (including where and when the infants and children and their parents slept) and on feeding practices (in particular, whether infants were breastfed and for how long breastfeeding continued).

The researchers identified 4 mutually exclusive groups, broadly described as nonsharers (66%), early bed sharers (only in infancy) (13%), late bed sharers (after the first year) (15%), and constant bed sharers (throughout the 4 years) (6%). The boy/girl ratio and the proportion of families of nonwhite ethnicity were slightly higher in all 3 bed-sharing groups, compared with the non-bed-sharing group. Higher maternal educational achievement and higher social class were positively associated with early bed sharing, negatively associated with late bed sharing, and not associated with constant bed sharing.

The 3 bed-sharing patterns were related significantly to breastfeeding at 12 months ( $P < .001$ ), whether the families shared beds late, early, or for the whole period. The prevalence of breastfeeding was significantly higher among the groups that shared beds constantly or early for each of the first 15 months after birth.

The authors state it is difficult to be precise about the dominant direction of the relationship between bed-sharing and breastfeeding, whether mothers share beds because they are breastfeeding or whether bed sharing makes breastfeeding more likely to be successful. They conclude that given the likely beneficial effects of bed sharing on breastfeeding rates and duration, risk reduction messages to prevent sudden infant deaths should be targeted more appropriately to unsafe infant care practices such as sleeping on sofas, bed sharing after the use of alcohol or drugs, or bed sharing by parents who smoke and that advice on whether bed-sharing should be discouraged needs to take into account the important relationship with breastfeeding. This research was partly funded by the Foundation for the Study of Infant Deaths.

Peter S. Blair, Jon Heron, and Peter J. Fleming (2010) *Relationship Between Bed Sharing and Breastfeeding: Longitudinal, Population-Based Analysis*. *Pediatrics*. published online 18 October 2010, 10.1542/peds.2010-1277.

## Protective effect of exclusive breastfeeding against infections during infancy: a prospective study

A study was carried out on the island of Crete, Greece to prospectively investigate the effects of breastfeeding on the frequency and severity of infections in a well-defined infant population who were known to have adequate vaccination coverage and healthcare standards. The study prospectively followed up 926 infants successfully for 12 months monitoring their feeding mode and all infectious episodes including acute otitis media (AOM), acute respiratory infection (ARI), gastroenteritis, urinary tract infection, conjunctivitis and thrush, all of which were recorded at 1, 3, 6, 9 and 12 months of life.

The researchers found that infants who were exclusively breastfed for 6 months, presented with fewer infectious episodes than their partially breastfed or non-breastfed peers and this protective effect persisted after adjustment for potential confounders for ARI, AOM and thrush. Prolonged exclusive breastfeeding was associated with fewer infectious episodes and fewer admissions to hospital for infection in the first year of life. Several confounding factors, including parental age and education, ethnicity, presence of other siblings, environmental tobacco smoke

exposure and season of birth were demonstrated to have an effect on frequency of infections during infancy.

The researchers conclude that exclusive breastfeeding contributes to protection against common infections during infancy and lessens the frequency and severity of infectious episodes. In this study partial breastfeeding did not appear to provide this protective effect, other (larger) studies have however found some protective effect, particularly against gastroenteritis and respiratory infection, although this is significantly reduced when compared with exclusive breastfeeding. It is also of interest to note that prevalence of breastfeeding in the cohort is very different to that in the UK, with exclusive breastfeeding rates being 27%, 17% and 10% at 1, 3 and 6 months.

Fani Ladomenou, Joanna Moschandreas, Anthony Kafatos, Yiannis Tselentis, and Emmanouil Galanakis (2010). *Protective effect of exclusive breastfeeding against infections during infancy: a prospective study*. *Arch. Dis. Child*. 27 September 2010, 10.1136/adc.2009.16

## Effect of Kangaroo Mother Care on physical growth, breastfeeding and its acceptability

The aim of this study was to determine whether the implementation of Kangaroo Mother Care (KMC) to low birth weight infants would improve breastfeeding, physical growth and its acceptability. A randomised controlled trial was performed over 16 months in which 110 neonates were randomized into a KMC group and a control group. The KMC group was subjected to KMC for at least 6 hours per day. The babies also received KMC after moving from the neonatal intensive care unit and at home. The control group received standard care (incubator or open care system). Weight, length and occipitofrontal circumference (OFC) were measured weekly for 3 months. The acceptability of KMC by mothers and nursing staff was assessed on day 7 after the start of KMC using a questionnaire incorporating the Likert scale. Breastfeeding rates were calculated based on history at end of three months.

The mean gestational age was  $35.48 \pm 1.20$  weeks in the KMC group and  $35.04 \pm 1.09$  weeks in the control group ( $P > 0.05$ ). KMC was initiated at a mean age of  $1.72 \pm 0.45$  days and the duration of KMC was  $9.74 \pm 1.48$  hours/day. The mean weight gain in gm/day in the KMC group was  $21.92 \pm 1.44$  compared to  $18.61 \pm 1.28$  in the control group ( $P < 0.05$ ). The mean length gain in cm/week was  $1.03 \pm 0.5$  in the KMC group compared to  $0.74 \pm 0.05$  in the control group ( $P < 0.05$ ). The mean OFC gain in cm/week was  $0.59 \pm 0.04$  in the KMC group compared to  $0.47 \pm 0.03$  in the control group ( $P < 0.05$ ).

The exclusive breastfeeding rate at end of three months was 88% in the KMC group compared to 72% in the control group ( $P < 0.05$ ). KMC improved physical growth, breastfeeding rates and was well accepted by both mothers and nursing staff.

Geeta Gathwala, Bir Singh, and Jagjit Singh (2010). *Effect of Kangaroo Mother Care on physical growth, breastfeeding and its acceptability*. *Trop Doct.* 2010; 40(4): p. 199-202.

## Dietary trans fatty acid intake and maternal and infant adiposity

The fatty acid composition in maternal diet and in breastmilk during lactation may be a factor in the development of childhood overweight later in life. To investigate the association between trans fatty acid and adiposity, 96 mother-infant pairs (exclusive breastfed; mixed fed; and formula fed) at 3 months postpartum were interviewed; body composition was measured onsite using the BOD POD and PEA POD for mothers and infants, respectively.

There were no significant differences in maternal percent body fat by feeding group (32.70, 33.70, and 35.73%, for exclusive, mixed and formula feeding, respectively).

Exclusively breastfed infants had higher percent body fat (24.87%) compared with their mixed-fed counterparts (22.15%) but not formula-fed infants (23.93). Mothers who consumed at least 4.5 g of trans fatty acids/day were 5.8 times more likely to have body fat  $\geq 30\%$  than those consuming less, and their infants were over two times more likely to have body fat  $\geq 24\%$ .

The authors conclude that the trans fatty acid content of the maternal diet may be associated with both maternal and infant body composition in the early postpartum period. More research is warranted regarding maternal dietary and breastmilk fatty acid composition and their effects on maternal and infant body composition and the development of childhood overweight later in life.

AK Anderson, DM McDougald, and M Steiner-Asiedu (2010). *Dietary trans fatty acid intake and maternal and infant adiposity*. *European Journal of Clinical Nutrition*. Advance online publication, 8 September 2010; doi:10.1038/ejcn.2010.166.

## Breastfeeding duration and academic achievement at 10 years

Previous studies have shown an association between breastfeeding and intelligence / improved cognitive development. The aim of this study was to examine the relationship between duration of breastfeeding and educational outcomes.

At 10 years of age, data from 1,038 children from the Western Australian Pregnancy Cohort (Raine) Study were linked to standardised mathematics, reading, writing, and spelling scores. Associations between breastfeeding duration and educational outcomes were estimated by using linear models with adjustment for gender, family income, maternal factors, and early stimulation at home through reading.

The results showed that 10-year-old children who were predominantly breastfed for 6 months or longer in infancy had higher academic scores than children who were breastfed for less than 6 months. The effect of breastfeeding on educational outcomes differed according to gender; boys were particularly responsive (in mathematics, spelling, reading, and writing) to a longer duration of breastfeeding.

The authors concluded that predominant breastfeeding for 6 months or longer was positively associated with academic achievement in children at 10 years of age. However, they pointed out that the effectiveness of breastfeeding differed according to gender; the benefits were only evident for boys.

Wendy H Oddy, Jianghong Li, Andrew J O Whitehouse, Stephen R Zubrick, and Eva Malacova (2010) *Breastfeeding Duration and Academic Achievement at 10 Years*. *Pediatrics*, Dec 2010; doi:10.1542/peds.2009-3489

## Timing of solid food introduction and the risk of obesity in preschool-aged children

Previous studies have suggested that the timing of solid food introduction in infants may be associated with childhood obesity. This study set out to examine the association between timing of introduction of solid foods during infancy and obesity at 3 years of age.

This research studied 847 children in Project Viva, a prospective pre-birth cohort study. The primary outcome was obesity at 3 years of age (BMI for age and gender 95th percentile). The primary exposure was the timing of introduction of solid foods, categorized as  $<4$ , 4 to 5, and 6 months. Separate logistic regression models for infants who were breastfed for at least 4 months ("breastfed") and

infants who were never breastfed or stopped breastfeeding before the age of four months ("formula-fed"), adjusting for child and maternal characteristics, which included change in weight-for-age z score from 0 to 4 months—a marker of early infant growth.

In the first 4 months of life, 568 infants (67%) were breastfed and 279 (32%) were formula-fed, and by the age of 3 years, 75 children (9%) were obese. Among breastfed infants, the timing of solid food introduction was not associated with obesity (odds ratio: 1.1 [95% confidence interval: 0.3–4.4]). Among formula-fed infants, introduction of solid foods before 4 months was associated with a six-fold increase in obesity at age 3 years and the association was not explained by rapid early growth (odds ratio after adjustment: 6.3 [95% confidence interval: 2.3–6.9]). Among formula-fed infants or infants weaned from breastmilk before the age of 4 months, introduction of solid foods before the age of 4 months was associated with increased odds of obesity at age 3 years.

Susanna Y. Huh, Sheryl L. Rifas-Shiman, Elsie M. Taveras, MD, Emily Oken, Matthew W. Gillman, (2011) *Timing of Solid Food Introduction and the Risk of Obesity in Preschool-Aged Children*, *Pediatrics*, Feb 2011, DOI:10.1542/peds.2010-0740

## Breastfeeding in infancy not shown to be associated with inflammatory status in healthy adolescents

Previous research has shown that breastfeeding may be associated with a decreased risk of cardiovascular disease in adulthood. A low-grade inflammation is associated with an increased risk of cardiovascular disease, even in apparently healthy children. This study looked to assess the potential effect of breastfeeding on the inflammatory status of healthy adolescents. Information on breastfeeding (duration) was obtained from parental records in 484 of 1,040 healthy European urban adolescents (56.4% females) that had a blood sample obtained as part of the Healthy Lifestyle in Europe by Nutrition and Adolescence study.

Blood serum inflammatory markers were measured, including high sensitivity C-reactive protein, complement factors 3 and 4, ceruloplasmin, adhesion molecules (L-selectin and soluble endothelial selectin, soluble vascular cell adhesion molecule 1, and intercellular adhesion molecule 1), cytokines, TGFβ1, and white blood cells. The researchers analysed and scored the association between breastfeeding and selected inflammatory markers.

The researchers found that breastfeeding was not significantly associated with any of the selected inflammatory markers after adjustment for gender and

propensity score. Breastfeeding was not associated with low-grade inflammatory status in healthy adolescents, suggesting that the potential cardiovascular benefits of breastfeeding are related to other mechanisms than inflammation. The authors recommend that groups at high risk for cardiovascular disease should be a target for further research concerning the effects of breastfeeding.

Verier CMP, Duhamel A, Beghin L et al (2011). *Breastfeeding in Infancy Is Not Associated with Inflammatory Status in Healthy Adolescents*. *J. Nutr.* published 19 January 2011, 10.3945/jn.110.128249

## Infants perceived as "fussy" more likely to receive complementary foods before four months

This study looked to assess early infant-feeding patterns in a cohort of low-income black mothers in the United States and to examine associations between maternal perception of infant temperament and complementary feeding before four months. It was hypothesised that a "fussy" infant temperament may lead parents to use food as a soothing technique. The researchers used cross-sectional data from the 3-month visit (n = 217) of the Infant Care, Feeding and Risk of Obesity Study to assess relationships between early feeding of solids or juice and 6 dimensions of perceived infant temperament.

A total of 77% of the infants were fed solid foods at 3 months, 25% were fed juice, and 6% were exclusively breastfed. Maternal perception of infant temperament was measured by using 6 subscales from a validated tool - the Infant Behavior Questionnaire-Revised. Two aspects of perceived infant temperament were associated with early feeding of solid foods: distress-to-limitations defined as "When placed on his/her back, how often did the infant fuss or protest?" and activity-level defined as "When put into the bath water, how often did the infant splash or kick?" Maternal characteristics significantly associated with early complementary feeding included breastfeeding, obesity, and depressive symptoms.

The authors concluded that low-income black mothers may represent a priority population for interventions aimed at improving adherence to optimal infant feeding recommendations. That maternal perceptions of several aspects of perceived infant temperament are related to early complementary feeding suggests that this is an important factor to include in future observational research and in the design of interventions.

Wasser H, Bentley M, Borja J (2011). *Infants Perceived as "Fussy" Are More Likely to Receive Complementary Foods Before 4 Months*. *Pediatrics*; 127(2): p. 229-237

## Review of dummy use and its potential impact on breastfeeding

Dummy (pacifier) use has become a cultural norm in many parts of the world. However there is widespread belief that this use may impact on breastmilk production and lead to cessation of breastfeeding. It is hypothesised that this may be due to the mechanical differences between sucking at the breast and sucking on the dummy or because offering a dummy instead of the breast to calm the infant may lead to less frequent breastfeeding. This in turn may reduce breastmilk production and shorten duration of breastfeeding in the long term. Conversely, it remains unclear whether breastfeeding cessation and a maternal intention to wean the infant from exclusive breastfeeding precedes the use of the dummy or vice versa. A review of studies related to dummy use and breastfeeding success was carried out by the Cochrane Collaboration. Only two trials met all of the reviewers criteria for reporting and they included 1,302 healthy, term breastfeeding infants.

In one (1), 1,021 mothers who were highly motivated to breastfeed were recruited at 15 days and in the second (2) 281 mothers were recruited at birth. Meta-analysis of the two combined studies showed that dummy use in healthy breastfeeding infants had no significant effect on the proportion of infants exclusively breastfed at three months (risk ratio (RR) 1.00; 95% confidence interval (CI) 0.95 to 1.06), and at four months of age (RR 0.99; 95% CI 0.92 to 1.06) and also had no effect on the proportion of infants partially breastfed at three months (RR 1.00; 95% CI 0.97 to 1.02), and at four months of age (RR 1.01; 95% CI 0.98 to 1.03).

The review concludes that in motivated mothers, there is moderate evidence from these two studies that dummy use in healthy term breastfeeding infants before and after lactation is established does not reduce the duration of breastfeeding up to four months of age.

The authors also note however that there is insufficient information on the potential harms of dummies on infants and mothers, for example neither study assessed the review's secondary outcome measures for mothers (maternal confidence, rate of breastfeeding difficulties such as cracked nipples, breast engorgement, mastitis) or infants (incidence of sudden infant death syndrome, oral candidiasis and dental malocclusion and infant crying or fussing). They add that further research is recommended to address the effect of dummy use on duration of breastfeeding in less motivated women and to assess the rate of breastfeeding difficulties faced by mothers associated with dummy use and the long-term effect on mother and infant health.

1. Jenik AG, Vain NE, Gorestein AN, Jacobi NE, for the Pacifier and Breastfeeding Trial Group. *Does the recommendation to use a pacifier influence the prevalence of breastfeeding?* Journal of Pediatrics 2009;155(3):350–4.

2. Kramer MS, Barr RG, Dagenais S, Yang H, Jones P, Ciofani L, et al. *Pacifier use, early weaning, and cry/fuss behavior: a randomized controlled trial.* JAMA 2001;286(3):322–6.

Jaafar SH, Jahanfar S, Angolkar M, et al. (2011) *Pacifier use versus no pacifier use in breastfeeding term infants for increasing duration of breastfeeding (Review).* The Cochrane Collaboration.

## Breastfeeding, brain activation to own infant cry, and maternal sensitivity

A small study of 17 mothers of healthy infants investigated the association between breastfeeding, maternal brain response to own infant stimuli, and maternal sensitivity in the early postpartum period. Exclusive breastfeeding and exclusive formula-feeding mothers underwent brain scanning in the first postpartum month to examine maternal brain activation in response to her own baby's cry versus control baby-cry. Dyadic interactions between mothers and infants at 3-4 months postpartum were videotaped in the home and blindly coded for maternal sensitivity. In the first postpartum month, breastfeeding mothers showed greater activations in the superior frontal gyrus, insula, precuneus, striatum, and amygdala while listening to their own baby-cry as compared to formula-feeding mothers. For both breastfeeding and formula-feeding mothers, greater activations in the right superior frontal gyrus and amygdala were associated with higher maternal sensitivity at 3-4 months postpartum.

The authors conclude that the results suggest links between breastfeeding and greater response to infant cues in brain regions implicated in maternal-infant bonding and empathy during the early postpartum period. Such brain activations may facilitate greater maternal sensitivity as infants enter their social world.

P Kim, R Feldman, LC Mayes, V Eicher, N Thompson, JF Leckman, and JE Swain (2011). *Breastfeeding, brain activation to own infant cry, and maternal sensitivity.* J Child Psychol Psychiatry, April 18, 2011

## Breastfeeding and child behaviour in the Millennium Cohort Study

The authors used data from a large, prospective, nationally representative UK cohort, the Millennium Cohort Study, to examine whether breastfeeding is associated with behavioural development in children aged 5 years. A total of 10,037 mother–child pairs from white ethnic background (9,525 term and 512 preterm children) were included in the analyses.

Duration of any breastfeeding was ascertained from parental interview at study baseline, when the children were aged 9 months. Child behaviour was assessed using a parent-completed questionnaire, the Strengths and Difficulties Questionnaire (SDQ). The authors used logistic regression to investigate the associations of breastfeeding duration with abnormal parent-rated SDQ total and sub-scores at age 5 in term and preterm children separately.

Abnormal SDQ scores were less common in term children (n=1,129 / 9,525, 12%) than pre-term (n=78 / 512, 15%) children. Term children breastfed for 4 months or longer (n=2,741 / 9,525, 29%) had lower odds of an abnormal total SDQ score (multivariable-adjusted OR compared with never-breastfed children (n=3,292 / 9,525, 35%) 0.67, 95% CI: 0.54 to 0.83). This effect was similar for all the SDQ sub-scores. In preterm children, longer duration of breastfeeding was generally associated with lower odds of abnormal SDQ total and subscores but the effect estimates were imprecise. The associations between exclusive breastfeeding and abnormal SDQ scores were similar to those of any breastfeeding and abnormal SDQ scores.

The findings suggest that, at least in term children, longer duration of breastfeeding is associated with fewer parent-rated behavioural problems in children aged 5 years. This association was also noted even when the researchers took into account other influences such as socio-economic or parental factors.

Katriina Heikkilä, Amanda Sacker, Yvonne Kelly, Mary Renfrew, Maria Quigley. *Breastfeeding and child behaviour in the Millennium Cohort Study*. Arch Dis Child 2011; doi:10.1136/adc.2010.201970

## Healthcare professionals' and mothers' perceptions of factors that influence decisions to breastfeed or formula feed infants

In this small study, a total of 20 UK health professionals completed a semi-structured interview exploring the reasons they believed mothers chose to use formula milk. There were also 23 mothers with an infant aged 6-12 months, who also reflected on their experiences of milk feeding.

Professionals described a range of influences on maternal decisions to breastfeed or formula feed including lack of knowledge, support and help with difficulties. These were strongly echoed in the reasons mothers gave for formula use, suggesting clear professional understanding of the challenges relating to breastfeeding. Although keen to give further support, professionals raised issues of lack of time and resources to support mothers.

The authors conclude that contrary to maternal beliefs of poor professional understanding, professionals had a clear perception of influences affecting early milk feeding choice. They call for further resources for health professionals working with new mothers to enable them to offer increased support, with the aim of increasing breastfeeding duration.

A Brown, P Raynor, and M Lee. *Healthcare professionals' and mothers' perceptions of factors that influence decisions to breastfeed or formula feed infants: a comparative study*. J Adv Nurs. 2011 Apr 20. doi: 10.1111/j.1365-2648.2011.05647.x

## Breastfeeding and risk of epilepsy in childhood: a birth cohort study

An observational study of 69,750 infants born in Denmark has concluded that breastfeeding may decrease epilepsy in childhood. Information on breastfeeding was reported by mothers at 6 and 18 months and information on epilepsy retrieved from the Danish National Hospital Register. Breastfeeding was associated with a decreased risk of epilepsy, with a dose-response like pattern. For example, children breastfed for 3 to 5, 6 to 8, 9 to 12, and >13 months had a 26%, 39%, 50%, and 59% lower risk of epilepsy after the first year of life, respectively, compared with children who were breastfed for <1 month. The authors conclude that the observed protective effect of breastfeeding may be causal.

Sun Y, Vestergaard M, Christensen J, et al. *Breastfeeding and risk of epilepsy in childhood: a birth cohort study*. J Pediatr. Epub 2011 Jan 14; doi:10.1016/j.jpeds.2010.11.035

## Breastfeeding of Newborns by Mothers Carrying Hepatitis B Virus

A systematic review of prospective studies to confirm the role of breastfeeding in mother-to-child transmission of hepatitis B virus has concluded that, after proper immunoprophylaxis, breastfeeding does not contribute to mother to child transmission of Hepatitis B. A total of 10 studies involving 751 breastfeeding infants and 873 non-breastfeeding infants were included.

Zhongjie Shi, MD; Yuebo Yang, MD; Hao Wang, MD; Lin Ma, MD; Ann Schreiber, BSN; Xiaomao Li, MD; Wenjing Sun, MD; Xuan Zhao, RN; Xu Yang, MD; Liran Zhang, MD; Wenli Lu, MD; Jin Teng, MD; Yufang An, MD. *Breastfeeding of Newborns by Mothers Carrying Hepatitis B Virus*. Arch Pediatr Adolesc Med. Published online May 2, 2011. doi:10.1001/archpediatrics.2011.72

## Premature delivery influences the immunological composition of colostrum and transitional and mature human milk

Human milk samples were collected from mothers delivering at term, preterm, and very preterm. Milk from the mothers was collected at 3 different time points after delivery corresponding to colostrum, transitional and mature milk and then concentrations of a range of immune factors and growth factors measured. Term and preterm colostrum were found to have very high levels of immune and growth factors, with some levels being higher in the preterm colostrum. However, the very preterm colostrum had lower levels of some factors than in term milk. The authors conclude that maternal lactogenic compensatory mechanisms may take effect only after 30 weeks gestation.

Cristina Castellote, Rosario Casillas, Carolina Ramirez-Santana, Francisco J. Perez-Cano, Margarida Castell, M. Gloria Moretones, M. Carmen Lopez-Sabater, and Angels Franch. *Premature delivery influences the immunological composition of colostrum and transitional and mature human milk*. J Nutr. 2011 Jun; 141(6):1181-7. Epub 2011 Apr 20.

## Randomised trial of sidecar crib use on breastfeeding duration (NECOT)

A randomised trial of 1,204 pregnant women intending to breastfeed was carried out at the Royal Victoria Infirmary in Newcastle to determine whether the use of sidecar cribs on the postnatal wards affected breastfeeding duration. The authors conclude that the use of sidecar cribs does not affect breastfeeding duration or rates of exclusive breastfeeding or the frequency of bed sharing once home. Helen L Ball, Martin P Ward-Platt, Denise Howel, Charlotte Russell (2011). *Randomised trial of sidecar crib use on breastfeeding duration (NECOT)*. Arch Dis Child, doi:10.1136/adc.2010.205344.

## The effect of breastfeeding on children's educational test scores at nine years of age: Results of an Irish cohort study.

A total of 8,226 9 year-old children were studied in Ireland as part of the 'Growing up in Ireland' study. Information relating to breastfeeding initiation and exposure duration was obtained retrospectively via parental recall. After confounding for a range of child, maternal, socio-economic and socio-environmental factors, children who were breastfed were found to have a 3.24 percentage point advantage on reading scores and a 2.23 percentage point advantage on mathematics scores using standardised reading and mathematics tests. Any amount of breastfeeding was associated with significantly higher test scores than no exposure, but evidence of a dose-response relationship was weak.

C McCrory and R Layte. *The effect of breastfeeding on children's educational test scores at nine years of age: Results of an Irish cohort study*. Soc Sci Med 21 Mar 2011