Interventions for promoting the initiation of breastfeeding (Review)

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ABSTRACT

Background
Despite the widely documented health benefits of breastfeeding, initiation rates remain relatively low in many high-income countries, particularly among women in lower income groups.

Objectives
To evaluate the effectiveness of interventions which aim to encourage women to breastfeed in terms of changes in the number of women who start to breastfeed.

Search strategy
We searched the Cochrane Pregnancy and Childbirth Group's Trials Register (30 May 2006), the Cochrane Central Register of Controlled Trials (*The Cochrane Library* 2003, Issue 1) and the following databases from inception to October 2002: MEDLINE, CINAHL, ERIC, Applied Social Sciences, PsychLIT, EMBASE, British Nursing Index, BIDS, EPI-centre. We also searched the following in October 2002 for 'grey literature: 'SIGLE, DHSS Data, and Dissertation Abstracts. We handsearched the Journal of Human Lactation, Health Promotion International and Health Education Quarterly from inception to October 1998. We scanned reference lists of all articles obtained.

Selection criteria
Randomised controlled trials, with or without blinding, of any breastfeeding promotion intervention in any population group except women and infants with a specific health problem.

Data collection and analysis
One review author independently extracted data and assessed trial quality for checking by a second author. We contacted investigators to obtain missing information.

Main results
Seven trials involving 1388 women were included. Five trials involving 582 women on low incomes in the USA showed breastfeeding education had a significant effect on increasing initiation rates compared to routine care (relative risk (RR) 1.53, 95% confidence interval (CI) 1.25 to 1.88).

Authors' conclusions
Evidence from this review shows that the forms of breastfeeding education evaluated were effective at increasing breastfeeding initiation rates among women on low incomes in the USA.

PLAIN LANGUAGE SUMMARY

Forms of breastfeeding education evaluated are effective at increasing breastfeeding initiation rates among women on low incomes in the USA

Breastfeeding is widely known to be good for both the baby's and the mother's health. Despite this, many women choose not to breastfeed their baby, especially women living in countries or communities where breastfeeding is not common. This review aims to assess which breastfeeding promotion programmes are successful at increasing the numbers of women who start to breastfeed. Five programmes were found to show overall success at increasing the number of poorer women in the USA who started to breastfeed their baby.

BACKGROUND

This review aims to assess ways of promoting breastfeeding. Less attention has been paid to this subject than to the promotion of artificial feeding. Women in most countries encounter promotion of artificial feeding in various forms, a factor which has been implicated in women choosing to feed their babies on formula (WHO Data Bank 1996).

There is extensive evidence for short-term and long-term health benefits of breastfeeding and the World Health Organization recommends that all infants should be fed exclusively on breast milk from birth to six months of age (WHO 2002). Babies who are not fully breastfed for the first three to four months are more likely to suffer health problems such as gastroenteritis (Howie 1990), respiratory infection (Victora 1989; Wright 1989), otitis media (Aniansson 1994; Duncan 1993), urinary tract infections (Marild 1990; Pisacane 1992), necrotising enterocolitis (Lucas 1990a), atopic disease if a family history of atopy is present (Burr 1989; Lucas 1990b; Saarinen 1995) and diabetes mellitus (Karjalainen 1992; Mayer 1988; Virtanen 1991). Research also indicates a positive relationship between having been breastfed and the bone health of the child (Lucas 1990a).

In addition, breastfeeding is beneficial to the mother's health. Women who do not breastfeed are significantly more likely to develop epithelial ovarian cancer (Gwinn 1990; Rosenblatt 1993) and are more likely to develop premenopausal breast cancer (Layde 1989; Newcomb 1994; UK Study Group 1993) than women who breastfeed. One study stated that women who do not breastfeed are at greater risk of hip fractures in their old age (Cumming 1993). A more recent review of several large international studies on this issue stated however "there is no evidence that lactation, even when frequent and prolonged, has a long term influence on the bone health in later life of individual women" (Dept of Health 1998).

Other social and practical benefits to the breastfeeding mother include the increased likelihood she will use up the body fat deposited in pregnancy (Dewey 1993), substantive savings on the expenses associated with artificial formula feeding (except in the case of mothers participating in welfare schemes and receiving subsidised formula milk powder), and the avoidance of effort involved in preparing formula feeds (MIDIRS 1997).

Attempts have been made to quantify public cost benefits of breastfeeding. For example, in the UK, the Department of Health has calculated that the state health system could save £10 for every extra mother who breastfed due to the reduction in child onset diabetes mellitus and £35 million each year in treating babies with gastroenteritis (Dept of Health 1995). The basis for such calculations is preliminary and rather speculative however. Further work is required to more fully clarify cost-effectiveness issues surrounding infant feeding.

Despite the many advantages of breastfeeding, many women choose to bottle feed their babies. Many of the reasons for this are likely to be cultural and include personal, social and structural biases against breastfeeding such as attitudes of family and close friends, attitudes to breastfeeding in public and employment practices (Renfrew 1998). The availability of subsidised infant formula milk through the UK based Welfare Food Scheme and the USA based Women, Infant and Children Supplemental Feeding Program may be an economic factor which contributes unintentionally to women in low-income groups choosing to formula feed. The extent to which individual countries have adopted the World Health Organization's International Code of Marketing of Breastmilk Substitutes (WHO 1981) may also be a contributing factor on the infant feeding decision, particularly for women in low- and middle-income countries.

International rates of initiation of breastfeeding are extremely variable between and within countries (*see* note 1 below). In Scandinavia and Eastern Europe, many countries have a high incidence of women starting to breastfeed including Russia (99% of women initiated breastfeeding in 1994), Finland (99% in 1983), Norway (98% in 1994 (Ammehjelpen 1994)), Sweden (98% in 1991), Denmark (95% in 1992), Romania (91% in 1991) and Poland (90% in 1988). Other individual countries with high breastfeeding rates include Japan, Switzerland and Luxembourg at 95% (AIIKU Institute 1997), 92% and 86% respectively in 1994 and Turkey where the prevalence of women initiating breastfeeding was 95% in 1988.

In central and southern Europe, historical data indicate initiation rates were relatively high, for example, in Israel where 72% of women initiated breastfeeding in 1988, Italy (72% in 1983), Spain (78% in 1984) and Greece with a slightly lower rate of 65% in 1981.

Lower rates of initiation of breastfeeding are evident in North America and Western Europe where, for example, only 62% of women started to breastfeed in England and Wales (Hamlyn 2002), and 57% in the USA in 1994, 59% in the Netherlands in 1985, and 55% in France in 1984. Higher incidences have been

reported in Canada, with 74% in 1993, and lower incidences in Scotland and Northern Ireland where initiation rates were only 54% and 47% respectively in 2000 (Hamlyn 2002) (*see* note 2 below).

In all countries, breastfeeding initiation rates are closely related to social class, income and educational levels. In those high-income countries where breastfeeding rates are typically low, the lowest rates are found among women in low-income groups. In England and Wales for example, only 54% of women classified as having 'never worked' or 60% of women in 'lower occupations' initiated breastfeeding in 2000 compared to 86% of women classified in 'higher occupations' (Hamlyn 2002). It is therefore important to examine which interventions might have an impact on rates in these groups.

The purpose of this review is to examine interventions which aim to encourage women to breastfeed, to evaluate their effectiveness in terms of changes in the number of women who initiate breastfeeding and to report any other effects (beneficial or adverse) of such interventions.

Notes:
(1) Unless otherwise stated, the source of international breastfeeding data is the WHO Global Databank on Breast-Feeding. The Databank is not comprehensive at this time and is dependent on data collected by individual countries using a variety of methods and/or indicators.
(2) Figures are standardised for mother's age and age at which she completed full-time education, factors strongly associated with the incidence of breastfeeding.

OBJECTIVES

(1) To identify and describe health promotion activity intended to increase the rate of initiation of breastfeeding.
(2) To evaluate the effectiveness of any such health promotion activity, in terms of changing the number of women who initiate breastfeeding.
(3) To evaluate the effectiveness of interventions within the following sub-groups of types of intervention:
(a) health education interventions;
(b) breastfeeding promotion packs distributed to mothers;
(c) promoting early mother-infant contact;
(d) population-based programs to promote initiation of breastfeeding.

(4) To compare the effectiveness of health promotion interventions within and between these areas as appropriate.
(5) To assess the impact of these interventions on secondary outcomes, namely, duration of breastfeeding, exclusive breastfeeding and other reported outcomes (beneficial or adverse).
(6) To assess the impact of these interventions on intermediate/process outcomes, for example, knowledge and attitudes, social and community support.

CRITERIA FOR CONSIDERING STUDIES FOR THIS REVIEW

Types of studies

Randomised controlled trials, with or without blinding. There was no limitation of study by country of origin or language.

Types of participants

All those exposed to interventions intended to promote breastfeeding. This includes pregnant women, mothers of newborn infants and women who may decide to breastfeed in the future. Population subgroups of women, such as women from low-income or ethnic groups, are also included in this review. Women and infants with a specific health problem, e.g. mothers with AIDS or infants with cleft palate, are excluded from this review.

Types of intervention

Any intervention aiming to promote the initiation of breastfeeding, which takes place before the first breastfeed. Evaluations of interventions taking place after the first breastfeed or whose primary purpose is to affect the duration or exclusivity of breastfeeding are excluded from this review.

Types of outcome measures

Initiation rate of breastfeeding.

SEARCH METHODS FOR IDENTIFICATION OF STUDIES

See: methods used in reviews.

We searched the Cochrane Pregnancy and Childbirth Group's Trials Register by contacting the Trials Search Co-ordinator (May 2006).

The Cochrane Pregnancy and Childbirth Group's Trials Register is maintained by the Trials Search Co-ordinator and contains trials identified from:
(1) quarterly searches of the Cochrane Central Register of Controlled Trials (CENTRAL);
(2) monthly searches of MEDLINE;
(3) handsearches of 30 journals and the proceedings of major conferences;
(4) weekly current awareness search of a further 37 journals.

Details of the search strategies for CENTRAL and MEDLINE, the list of handsearched journals and conference proceedings, and the list of journals reviewed via the current awareness service can be found in the 'Search strategies for identification of studies'

section within the editorial information about the Cochrane Pregnancy and Childbirth Group.

Trials identified through the searching activities described above are given a code (or codes) depending on the topic. The codes are linked to review topics. The Trials Search Co-ordinator searches the register for each review using these codes rather than keywords.

In addition, we searched the Cochrane Central Register of Controlled Trials (*The Cochrane Library* 2003, Issue 1) and the following databases from inception to October 2002: MEDLINE, CINAHL, ERIC, Applied Social Sciences, PsychLIT, EMBASE, British Nursing Index, BIDS, EPI-centre. We searched the following in October 2002 for 'grey literature': SIGLE, DHSS Data, and Dissertation Abstracts. Details of the search strategies for all these databases can be obtained from the review authors.

We also handsearched the Journal of Human Lactation, Health Promotion International and Health Education Quarterly from inception to October 1998.

We scanned reference lists of all relevant papers retrieved.

We did not apply any language restrictions.

METHODS OF THE REVIEW

Two authors independently assessed over 1288 titles and abstracts of studies, identified from all sources, for relevance. Where no clear decision could be made on the basis of the title or abstract, we considered the studies relevant. This process identified 59 potentially relevant studies for which we retrieved full reports for more detailed consideration.

One author used a prescreen form to systematically assess retrieved papers against the inclusion criteria and to classify included studies by the type of health promotion intervention. This included three papers which required translation into English before prescreening, namely, papers in Portuguese, Russian and Croatian. We contacted authors to clarify or obtain relevant details of individual studies, particularly to request details of their randomisation processes. A second author independently checked fifty papers that were classified as possible exclusions during the prescreening process. We excluded all. We identified two studies as ongoing.

One author used data extraction and quality appraisal forms to extract data from the remaining seven studies. A second author then checked the data. Any disagreements were settled through discussion between authors. This resulted in seven studies being included in this review. Studies were classified by type of intervention: health education, breastfeeding promotion packs, and early mother-infant contact. One author entered data into the Review Manager software (RevMan 2003).

We assessed the validity of each included study according to the criteria outlined in the Cochrane Reviewers' Handbook (Alderson 2004). We assessed selection bias on the basis of concealment of allocation: A -adequate; B - unclear; C - inadequate or D - not used. We rated performance bias, attrition bias and detection bias as: A - adequate; B - unclear; C- partially adequate; D-inadequate. We summarised validity of studies as outlined in the Cochrane Reviewer's Handbook (Alderson 2004):
A - low risk of bias (all of the criteria met with A ratings)
B - moderate risk of bias (one or more of the criteria partly met: C rating)
C - high risk of bias (one or more criteria not met: B or D ratings).

We considered meta-analysis appropriate to evaluate the effect of each type of intervention which measured the primary outcome of initiation of breastfeeding. Figures show calculated individual and pooled relative risks with 95% confidence intervals for dichotomous data on initiation of breastfeeding from studies where data allow an estimation. We calculated the individual relative risks on an intention-to-treat basis whereby the data from primary studies allow participants to be analysed according to the group to which they were initially allocated, regardless of whether or not they later withdrew or were lost to the study. Key differences in characteristics of participants and/or methods of implementation of the intervention are discussed in interpretation of results.

Subgroup analysis to compare the differential effect of interventions on both initiation and duration rates was not possible due to the different types of intervention/limited number of studies with both initiation and duration outcomes. This was limited further by the differences in type of intervention across the studies.

The nature of health promotion interventions to achieve a positive outcome in terms of an increase in the number of women starting to breastfeed warrants reversal of the traditional Cochrane Database of Systematic Reviews convention whereby a relative risk of less than one indicates that the intervention is better than the control (Alderson 2004). For the purposes of this review therefore, a relative risk of more than one indicates that the intervention has a more favourable effect on initiation rates than the control. This is displayed by the dot appearing to the right of the central vertical line that indicates no difference.

We used a fixed-effect approach to summarise results due to its validity as a test of significance of the overall null hypothesis, to provide an average measure of treatment effect in the studies and to avoid giving more weight to the results of smaller studies as in the case of the random-effects analysis (Alderson 2004). The potential significance between-study variation (as a result of heterogeneity of studies in terms of the nature of intervention within a type of intervention group, characteristics of participants) is considered as appropriate in interpretation of the results using a fixed-effect approach. We conducted further statistical analysis of subgroups of

studies within an intervention group where appropriate although such analysis is limited due to the lack of homogeneity across many aspects of individual studies within an intervention-type group.

No studies measuring the primary outcome of initiation rates of breastfeeding were excluded from the review or meta-analysis and no sorting of studies for ordering of meta-analyses was considered necessary on the basis of methodological quality (*see* 'Methodological quality of included studies' below for details).

DESCRIPTION OF STUDIES

See 'Characteristics of included studies' table'.

This review has a total of seven included studies, two ongoing studies awaiting publication (therefore not currently included in this review) and 50 excluded studies. The excluded studies include two studies which are ongoing but would not be included on completion due to the aims of both studies being outside the focus of this review (Carfoot 2001; Graffy 2001) and one study which was excluded due to lack of information about outcome data despite efforts to contact the authors (Chapman 1986). Three studies are awaiting assessment (Caulfield 1998; Grossman 1988; Sisk 2004). Two studies (Caulfield 1998; Sisk 2004) are cluster randomised controlled trials, which will be incorporated into the Review when appropriate statistical measures are available (Alderson 2004). With the third study (Grossman 1988) there is a lack of information in this paper (abstract only) to assess the method of randomisation and other aspects of quality. Further information has not become available despite efforts to contact authors.

All seven studies evaluated the effect of the intervention in terms of an intended change in initiation rates (Brent 1995; Coombs 1998; Hill 1987; Howard 2000; Lindenberg 1990; Ryser 2004a; Serwint 1996). Six studies were conducted in the USA (Brent 1995; Coombs 1998; Hill 1987; Howard 2000; Ryser 2004a; Serwint 1996) and one in Nicaragua, Central America (Lindenberg 1990). Five of the studies have evaluated the impact of the intervention on both initiation and duration rates (Brent 1995; Hill 1987; Howard 2000; Lindenberg 1990; Serwint 1996). Six studies have targeted participants on low incomes (Brent 1995; Coombs 1998; Hill 1987; Lindenberg 1990; Ryser 2004a; Serwint 1996). With the exception of the study conducted by Lindenberg (Lindenberg 1990) in Nicaragua, all of these interventions were implemented amongst low-income women in the US. One study has evaluated the effect of an intervention amongst a low-income group belonging primarily to an ethnic minority group, namely African-American women (Serwint 1996).

(1) Five trials evaluated health education (*see* 'Characteristics of included studies' for details of each health education intervention):

- Brent 1995: white low-income women, unmarried and with an educational level of 12 years or below;
- Coombs 1998: public health facility based, education programme (self-help manual) for low-income pregnant women;
- Hill 1987: formal health education combined with written literature delivered by health professionals to mostly white, low-income women;
- Ryser 2004a: Best Start health education program (repeated one-to-one) delivered to low-income women who intended to bottle feed or were undecided;
- Serwint 1996: single formal health education session delivered in the antenatal period to low-income women who were mostly African-American.

(2) One trial evaluated breastfeeding promotion packs:

- (Howard 2000) in a sample of white, well-educated, women with belonging to middle or high incomes.

(3) Early mother-infant contact (hospital based):

- Lindenberg 1990: early mother-infant contact combined with minimal breastfeeding education intervention delivered to primiparous women living in poor urban areas of Managua with a mean age of 20 years.

No trials of population-based programs to promote initiation of breastfeeding were found.

METHODOLOGICAL QUALITY

Assessment of studies for potential sources of selection, performance, attrition and detection bias and overall risk of bias (as recommended by Alderson 2004) has resulted in all seven studies included in this review being classified as having a high overall risk of bias due to unclear or inadequate allocation concealment (*see* Table 01 for summary of quality assessment of included studies).

In regard to attrition bias, three of the seven studies reported breastfeeding initiation for all participants (Brent 1995; Hill 1987; Lindenberg 1990). The remaining four studies had losses to follow-up between recruitment and breastfeeding initiation of around 8% (Ryser 2004a; Serwint 1996), 19% (Howard 2000) and 25% (Coombs 1998).

Given that there are genuine pragmatic considerations when delivering and evaluating breastfeeding promotion interventions, the ability to reduce performance bias is limited and this should be recognised as an inherent weakness of this particular type of evidence base rather than of the particular studies included in this review. The only study which was considered to have adequately addressed potential sources of performance bias was the evaluation of a breastfeeding promotion pack compared to a commercial formula pack (Howard 2000), a study which was able to maintain blinding of both participants and providers through the use of

sealed, similarly designed, packs more comparable with the use of a placebo and treatment in a therapeutic trial.

In the case of detection bias, the objective nature of the outcome being assessed, namely, whether a woman starts to breastfeed or not at a predefined timepoint, limits the scope for potential influence by the assessor, regardless of their being blind to the participant's group allocation.

RESULTS

Seven trials involving 1388 women are included. Statistical analyses of data for the primary outcome of initiation of breastfeeding appear below. The seven studies were classified and analysed under three types of intervention: health education, breastfeeding promotion packs, and early mother-infant contact. Descriptive analyses of secondary and intermediate outcomes are included where available.

(1) Health education interventions (comparison group one)
Five studies (Brent 1995; Coombs 1998; Hill 1987; Ryser 2004a; Serwint 1996) (including 582 women) evaluated the effect of health education on the initiation of breastfeeding. When all studies were combined for meta-analysis, a statistically significant increase in the number of women starting to breastfeed was demonstrated as a result of the health education interventions (relative risk (RR) 1.53, 95% confidence interval (CI) 1.25 to 1.88). These interventions were all conducted among women on low incomes in a high-income country setting (USA).

Analysis of the single study evaluating the effect of a health education plus postnatal support type intervention shows a statistically significant effect (RR 2.17, CI 1.42 to 3.32) in favour of increasing initiation rates (defined as breastfeeding in hospital) when delivered to a total of 108 white, low-income women in the USA (Brent 1995). The authors also reported a significant increase in the median duration of breastfeeding as a result of the intervention (I: 84 days; C: 33 days). This intervention consisted of two to four breastfeeding education sessions for 10 to 15 minutes each during the prenatal period, delivered on a one-to-one basis by a lactation consultant. The content of sessions was based on the participants' needs and interests. After delivery, mothers were followed up with daily inpatient rounds by the lactation consultant, a telephone call 48 hours after discharge, a visit to the lactation clinic at one week and the presence of the lactation consultant at each health supervision visit until weaning or when the infant was one year of age, whichever came first. Professional education was also directed at nursing and medical staff who interacted with the breastfeeding dyad.

Additional variation between studies, for example, definitions of routine care, the methods, content and duration of the health education interventions, does not enable further inference to be drawn regarding the relative effectiveness of individual interventions within this category.

(2) Breastfeeding promotion packs (comparison group two)
A single study (Howard 2000) involving 547 women reported on the outcome of initiation of breastfeeding. The provision of a non-commercial breastfeeding promotion pack compared to a formula company produced pack has been shown to have no effect (RR 0.93, CI 0.80 to 1.08) on increasing initiation rates among women of middle- or higher-income groups in a high-income country setting (USA). The authors also reported no effect on rates of stopping breastfeeding up to two weeks (RR 1.58, CI 0.97 to 2.56).

(3) Early mother-infant contact followed by separation (comparison group three)
A single study (Lindenberg 1990) (including 259 women and baby pairs) reported on the outcome of initiation of breastfeeding. It must be noted that whilst this intervention evaluated early mother-infant contact immediately after birth, mothers and babies were then separated for the rest of their stay. This study was shown to have no effect (RR 1.05, CI 0.94 to 1.17) on increasing initiation rates among women living in a low- and middle-income country setting (Nicaragua).

DISCUSSION

The meta-analysis of the five studies evaluating the effectiveness of health education interventions for increasing initiation rates of breastfeeding showed the interventions were effective overall (RR 1.53, 95% CI 1.25 to 1.88). The studies were small, with the largest having only 123 participants. All five evaluated programmes delivered in the USA to low-income women. Programme components varied, however, all forms of health education included in this review seem to have increased breastfeeding rates.

The evaluation of hospital breastfeeding promotion packs compared to formula-company produced materials about infant feeding (Howard 2000) showed this intervention to be ineffective at increasing initiation rates of breastfeeding. This trial was of high quality with sample size sufficient to provide 80% power to detect a 15% difference in breastfeeding initiation between the groups. However, approximately 40% of women in both groups reported receipt of formula company promotion items from sources other than their obstetric provider. Overall, this evidence provides clear justification for the recommendation that this form of breastfeeding promotion intervention should be abandoned to avoid inappropriate use of valuable breastfeeding promotion resources (*see* 'Implications for practice' under 'Reviewers' conclusions').

The evaluation of early mother-infant contact immediately after birth prior to complete separation until discharge on breastfeeding initiation rates (Lindenberg 1990), which was the only study included in this review that was conducted in a low- to middle-

income country setting (Nicaragua), found no effect. In this study the overall breastfeeding initiation rate was 87%, higher than in the other included studies (all conducted in the USA). Standard care was complete separation of mother and infant throughout hospitalisation (normally 12 to 24 hours). No sample-size calculation is reported. This finding suggests that early mother-infant contact followed by complete separation did not increase or decrease breastfeeding initiation rates among women living in poor urban areas in a low- to middle-income country setting. Generalisation of the result of this evaluation is not recommended due to the moderate quality and size of the study and to fundamental concerns regarding the practice of routine separation of mother and baby prior to hospital discharge. The World Health Organization recommends mothers and infants should not be separated after birth unless there is an unavoidable medical reason (WHO 1998). In addition, the literature on the promotion of the duration of breastfeeding provides clear evidence of the benefits of ongoing mother and baby contact during the hospital stay to support the mother's ability to breastfeed (Bonnin 1989; Inch 1989; Perez-Escamilla 1994; Renfrew 2000).

AUTHORS' CONCLUSIONS

Implications for practice

The health education interventions included in this review are shown to improve initiation rates among low-income women in the USA.

Early mother-infant contact followed by complete separation until hospital discharge was not effective when targeting women living in poor urban areas in a low- and middle-income country setting. Further research into early mother-infant contact followed by rooming-in until hospital discharge may, however, be effective at increasing breastfeeding initiation rates among various population groups.

Breastfeeding promotion packs, in contexts where formula feeding packs are very widely distributed, may be an inappropriate use of valuable breastfeeding promotion resources that could be more effectively used for population-appropriate breastfeeding education.

Implications for research

The effectiveness of interventions reviewed here needs to be assessed in diverse countries and settings in studies that are adequately powered and that supply full details about the content of education delivered, the people (e.g. peer or professional) who delivered it, and the training and experience these people had. In addition, interventions that combine health education before the birth with support during the days immediately after the birth should be evaluated and compared with those that offer education alone.

POTENTIAL CONFLICT OF INTEREST

None known.

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Searches for studies relevant to this Cochrane review were conducted by Lisa Mather (Information Officer, NHS Centre for Reviews and Dissemination, University of York). Searches of relevant Cochrane databases were conducted by Lynn Hampson (Trials Search Co-ordinator, Cochrane Pregnancy and Childbirth Group, Liverpool Women's Hospital NHS Trust).

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TABLES

Characteristics of included studies

Study	**Brent 1995**
Methods	Randomisation by permuted block. Selection bias: unclear whether allocation concealment was adequate Performance bias: inadequate due to non-blinded study. Attrition bias: adequate - breastfeeding initiation reported for all 108 women in the study. Analysis not by intention to treat. Detection bias: outcome assessors were not blinded to group allocations. Overall risk of bias: high.
Participants	108 English speaking, nulliparous, pregnant women attending a prenatal clinic, regardless of infant feeding preference were recruited into study. Participants stratified by age into 3 groups (less than 20, 20-29, or at least 30 years).
Interventions	Experimental group: (n = 51). Bf education and support provided throughout the prenatal and postpartum periods and into the first year of the child's life. Education consisted of 2-4 individual 10-15 minute sessions with a lactation consultant discussing the benefits and practice of bf. Content of sessions was based on the patients needs and interests. After delivery, mothers were followed up with daily inpatient rounds by the lactation consultant. Further follow up consisted of a telephone call 48 hours after discharge, a visit to the lactation clinic at 1 week and lactation consultation present at each health supervision visit until weaning or when the infant was 1 year of age, whichever came first. Professional education was directed at nursing and medical staff who interacted with the bf dyad. Control group: (n = 57). Routine care, consisting of optional prenatal bf classes; postpartum bf instruction by nurses and doctors; outpatient follow up in the paediatric ambulatory department.
Outcomes	Incidence of breastfeeding in hospital. Incidence of breastfeeding at 2 weeks. Incidence of breastfeeding at 2 months.

	Incidence of breastfeeding at 6 months. Median duration of breastfeeding.
Notes	To determine if a comprehensive breastfeeding promotion programme increased the incidence and duration of breastfeeding in a low-income population.
Allocation concealment	B – Unclear

Study	**Coombs 1998**
Methods	Allocation method was an opaque container filled with 100 tags (50 - experimental group; 50 - control group). Following greater selection of women to the control group, a statistician calculated the number of C tags to be removed to bias further selection in favour of I tags until groups were balanced. Selection bias: inadequate allocation concealment. Performance bias: inadequate due to non-blinding. Attrition bias: not adequate - 23/104 lost from the intervention group and 26/96 from the control group (24.5% overall). Analysis was not by intention to treat. Detection bias: not clear if those assessing outcomes were blind to group allocation. Overall risk of bias: high.
Participants	200 pregnant women, age 18 years or more, literate, no medical conditions likely to make bf difficult, willing to consider using the manual and to undertake interview about bf. Those who agreed to participate after the interview differed significantly from those who declined in terms of parity, bf knowledge, attitudes, confidence and intention to bf.
Interventions	Experimental group (n = 104). Received the self-help manual 7 weeks before delivery during standard prenatal breastfeeding counseling from nutritionist. The manual was modelled on successful self-help smoking cessation interventions to reduce cigarette smoking among low-income pregnant women using cognitive behavioural theory. Received a total of two prenatal interviews and two postnatal interviews. Control group (n = 96). Standard prenatal breastfeeding counseling from nutritionist. No manual. Received a total of two prenatal interviews and two postnatal interviews.
Outcomes	Exclusive bf at hospital discharge or if bf initiated later, exclusive bf within 1 week.
Notes	To determine if a self-help manual assisted low-income pregnant women to prepare for, initiate and maintain breastfeeding.
Allocation concealment	C – Inadequate

Study	**Hill 1987**
Methods	Table of random numbers was used to allocate women of different parity to intervention or control groups. Selection bias: unclear whether allocation concealment was adequate. Performance bias: inadequate. Participants were not excluded from any breastfeeding classes offered by the staff at the antepartum unit regardless of group allocation. Attrition bias: adequate - breastfeeding initiation reported for all 64 participants. Detection bias: unclear if outcome assessors were blind to group allocations. Overall risk of bias: high.
Participants	64 women intending to give birth at the study hospital and keep their baby, and who gave birth to a healthy infant, and had a telephone or agreed to return the Telephone Interview Survey by post. 95% of the total sample were White women.
Interventions	Experimental group (n = 31). Attended a 40 minute lecture including 5-10 minutes for questions and answers; received a pamphlet with information that reinforced lecture content.

	Control group (n = 33). Routine breastfeeding classes to all women attending antenatal clinic with no lecture, discussion, pamphlet or post-test.
Outcomes	Bf knowledge scores. Bf outcomes: no bf, any bf, bf less than 6 weeks, bf more than 6 weeks.
Notes	To determine the effects of a breastfeeding education programme among low-income pregnant women in Chicago.
Allocation concealment	B – Unclear

Study	**Howard 2000**
Methods	Randomisation using computer-generated random number lists. Potential participants were identified by regularly reviewing first prenatal appointments scheduled at each of the six clinical sites. Randomly sized blocks of pregnant women were stratified further by obstetric practice before assigning to study group. Selection bias: unclear whether allocation concealment was adequate. Performance bias: adequate due to blinding of both participants and providers. 56% of the intervention (research pack) group reported prenatal receipt of formula company promotion items from sources other than their obstetric provider. Attrition bias: partially adequate - the reasons for withdrawals in the prenatal (intervention) phase of the study were not reported by group. Authors stated that attrition from the study did not vary significantly by study group. Of the 547 women randomised, breastfeeding initiation data were not reported for 103 (18.9%). Analysis was by intention to treat. Detection bias: outcome assessors were blind to group allocations. Overall risk of bias: moderate.
Participants	547 pregnant women attending prenatal visits at any one of six obstetric outpatient settings in Rochester, New York. Participants were largely white (94.4%) and privately insured (96.8%) and most had plans to return to work within 6 months (60%).
Interventions	Experimental group (n = 270). At the first prenatal visit, participants received a research pack containing a generic diaper bag, non-commercial educational materials on pregnancy, infant feeding and infant growth and development, a coupon redeemable for $5 worth of infant items at a local store, and a package of electrical socket outlet covers. Control group (n = 277). At the first prenatal visit, participants received a commercial pack containing a formula company diaper bag, formula company produced educational materials on pregnancy, infant feeding and infant growth and development, a can of powdered formula, a business reply card to join a 'baby club' redeemable for a case of infant formula, and several infant formula discount coupons.
Outcomes	Any bf at delivery. Mean duration (days) of any bf. Cessation of breastfeeding during hospital stay. Cessation of breastfeeding in relation to breastfeeding goals. Risks for cessation of breastfeeding at 2 weeks.
Notes	To compare the effect of formula company-produced materials about infant feeding, to bf promotion materials without formula advertising, on breastfeeding initiation and duration.
Allocation concealment	B – Unclear

Study	**Lindenberg 1990**
Methods	Randomisation using a table of random numbers for the first 3 months. In the fourth month, a third group were assigned consecutively (due to ethical and organisational limitations) to a second intervention group. Results from this group have been excluded from this study due to the lack of randomisation for allocation.

	Selection bias: unclear whether allocation concealment was adequate. Performance bias: unclear whether blinding of participants and providers for delivery of intervention and standardised care was adequate. Attrition bias: adequate - breastfeeding initiation reported for all 259 women in the trial. Other withdrawals not reported by group. Detection bias: outcome assessors were blinded to hypothesis regarding breastfeeding and early mother-infant contact. Overall risk of bias: high.
Participants	259 women experiencing a normal, vaginal delivery with no complications and living in poor urban areas of Managua, Nicaragua.
Interventions	Experimental group (n = 136). First 3 months of study: 45 minutes of mother-infant contact immediately after birth with standardised (uniform) breastfeeding promotion followed by complete separation until discharge. Standardised breastfeeding promotion consisted of a series of specific breastfeeding promotional messages. Control group (n = 123). First 3 months of study: complete separation throughout hospitalisation with usual (ad hoc) breastfeeding promotion. Ad hoc breastfeeding promotion consisted of the routine infant feeding information a mother might receive which, given the large volume of deliveries and short hospital stay, was usually very scant to non-existent.
Outcomes	Any bf at 1 week. Exclusive bf at 1 week. Any bf at 4 months. Exclusive bf at 4 months.
Notes	To examine the effects of early postpartum mother-infant contact, followed by separation until discharge, on the incidence and continuation of breastfeeding.
Allocation concealment	B – Unclear

Study	**Ryser 2004a**
Methods	Random assignment by participants selecting a sealed envelope (not sequentially numbered, opacity not specified) to determine assignment to intervention or control group. Selection bias: unclear whether allocation concealment was adequate. Performance bias: inadequate due to lack of blinding of researcher and of participants. Attrition bias: partially adequate - withdrawals reported by group (1/27 from the intervention group and 3/26 from the control group, 7.4% overall) but no reasons for losses provided. Detection bias: outcome assessors were not blinded to group allocations or study hypotheses. Overall risk of bias: high.
Participants	54 English speaking pregnant women of 18 years or more, literate, eligible for Medicaid, access to telephone and stated feeding intention of 'bottle-feed' or 'undecided'. Marital status and intention to bottle feed differed significantly between comparison groups.
Interventions	Experimental group (n = 26). Received the Best Start Program (Bryant and Roy 1990), presented as a breastfeeding promotion campaign that aims to allow health professionals to examine women's misconceptions and educate them about their specific concerns. It has been marketed since 1992 and its materials have been used by various programs, including the SNPWIC Program. In this study, the researcher used the 'Best Start' videotapes, training manuals and handouts to implement the educational program during four prenatal visits (two more than control group as visits also included data collection phase). Control group (n = 28). No exposure to Best Start Program. No details of routine breastfeeding promotion activities at the physician's office were provided.

Outcomes	Any bf at one week postpartum. Attitudes to breastfeeding. Social and professional support.
Notes	To evaluate the effect of the 'Best Start' program on breastfeeding attitudes, intention and initiation in low-income women.
Allocation concealment	B – Unclear

Study	**Serwint 1996**
Methods	Random number table with blocks of 10 to assign participants. Allocation of women to a paediatrician was not completely random as based on paediatrician availability according to mother's due date. Selection bias: inadequate concealment of allocation. Performance bias: unclear whether participants were blinded to their assigned intervention although providers do not appear to have been blinded to assigned intervention. Attrition bias: partly adequate - comparable withdrawals reported by group (7/84 from the intervention group and 5/75 from the control group, 8% overall), with reason for losses. Detection bias: unclear if outcome assessors were blind to group allocations. Overall risk of bias: high.
Participants	156 nulliparous women, > 18 years, between 8 and 28 weeks gestation, who had not yet selected a paediatrician or wanted their infant to receive paediatric care at the hospital-based paediatric clinic. Both experimental and control groups comprised 91% of African- American women.
Interventions	Experimental group (n = 81). In addition to routine care, received a scheduled prenatal visit between 32 and 36 weeks gestation at a hospital-based clinic with the infant's future paediatrician. The clinic was in an urban academic medical centre where mothers received their obstetric care. Prior to visits, paediatricians received training in counseling parents of newborn infants and bf techniques/promotion. During visits, paediatricians recorded data on timing of pregnancy, preparation for the baby, involvement of father, social support and maternal medical history. Parents-to-be were counseled on feeding options, advantages of bf, infant car safety, circumcision and access to paediatric healthcare. Control group (n = 75). Similar management except no prenatal paediatric visits.
Outcomes	Bf intent before prenatal visit. Bf initiation at birth. Bf at 30 days postpartum. Bf at 60 days postpartum. Mothers who changed their mind in favour of bf after enrolment. Parent-physician relationship.
Notes	To assess the impact of prenatal paediatrician visits on breastfeeding decisions of low-income mothers.
Allocation concealment	C – Inadequate

bf: breastfeed(ing)
C: control
DPA: Department of Public Assistance
I: intervention
n.s.: not significant
SNPWIC: Supplemental Nutrition Program for Women Infants and Children

Characteristics of excluded studies

Study	**Reason for exclusion**
Bishop 1978	No concurrent controls (three interventions groups, no routine care group).

Byrne 2000	Not concerned with activity intended to increase breastfeeding initiation rates.
Carfoot 2001	Not concerned with activity intended to increase breastfeeding initiation rates.
Cattaneo 2001	Not concerned with activity intended to increase breastfeeding initiation rates.
Chapman 1986	Lack of outcome data. We have written to the authors but have not yet received clarification.
Feldman 1987	Not concerned with activity intended to increase breastfeeding initiation rates.
Froozani 1999	Not concerned with activity intended to increase breastfeeding initiation rates.
Gordon 1999	Not concerned with activity intended to increase breastfeeding initiation rates.
Graffy 2001	Not concerned with activity intended to increase breastfeeding initiation rates.
Haider 2000	Not concerned with activity intended to increase breastfeeding initiation rates.
Harvey 1996	Not concerned with activity intended to increase breastfeeding initiation rates.
Hegedus 2000	Not an RCT (before-after study).
Henderson 2001	Not concerned with activity intended to increase breastfeeding initiation rates.
Kaplowitz 1983	From information provided, we could not tell whether or not randomisation had taken place. We have written to the authors but have not yet received clarification.
Kistin 1990	Quasi-RCT (women were allocated to the intervention group if they attended clinic on Monday, and to the control group if they attended on Friday).
Kramer 2001	This study (PROBIT) was primarily concerned with activity intended to increase the duration, but not the initiation, of breastfeeding.
Langer 1996	Not concerned with activity intended to increase breastfeeding initiation rates.
Langer 1998	Not concerned with activity intended to increase breastfeeding initiation rates.
Loh 1997	Quasi-RCT (intervention was delivered in alternate weeks).
MacVicar 1993	Not concerned with activity intended to increase breastfeeding initiation rates.
Martens 2000	Not an RCT (not randomised).
Martens 2001	From information provided, we could not tell whether or not randomisation had taken place. We have written to the authors but have not yet received clarification.
Matilla Mont 1999	Not an RCT (before-after study).
McEnery 1986	Not an RCT (no randomisation at the point of analysis).
McInnes 2000	Not an RCT (not randomised).
Moran 2000	Not concerned with activity intended to increase breastfeeding initiation rates.
Morrow 1999	Not concerned with activity intended to increase breastfeeding initiation rates.
Nikodem 1998	Not concerned with activity intended to increase breastfeeding initiation rates.
Oakley 1990	Not concerned with activity intended to increase breastfeeding initiation rates.
Page 1999	Not an RCT (not randomised).
Pobocik 2000	Quasi-RCT (some school principals would not allow recruitment of control subjects).
Prakhin 2001	Not concerned with activity intended to increase breastfeeding initiation rates.
Rea 1999	Not concerned with activity intended to increase breastfeeding initiation rates.
Redman 1995	Not concerned with activity intended to increase breastfeeding initiation rates.
Reifsnider 1996	Not an RCT (not randomised).
Ross 1983	Not concerned with activity intended to increase breastfeeding initiation rates.
Rossiter 1994	From information provided, we could not tell whether or not randomisation had taken place. We have written to the authors but have not yet received clarification.
Schafer 1998	Not an RCT (not randomised).

Characteristics of excluded studies (*Continued*)

Schy 1996	Not concerned with activity intended to increase breastfeeding initiation rates.
Sciacca 1995	Quasi-RCT (randomisation alternate and not concealed).
Shaw 1999	Not an RCT (not randomised).
Toma 2001	Not an RCT (not randomised).
Turan 2001	Not concerned with activity intended to increase breastfeeding initiation rates.
Turnbull 1996	Not concerned with activity intended to increase breastfeeding initiation rates.
Volpe 2000	Quasi-RCT (randomisation not concealed, comparison groups not concurrent).
Waldenstrom 1994	Not concerned with activity intended to increase breastfeeding initiation rates.
Westphal 1995	Lack of outcome data. We have written to the authors but have not yet received clarification.
Wiles 1984	Not concerned with activity intended to increase breastfeeding initiation rates.
Zimmerman 1999	Not an RCT (not randomised).

PROBIT: Promotion of breastfeeding intervention trial
RCT: randomised controlled trial

Characteristics of ongoing studies

Study	**Forster 1999**
Trial name or title	Effect of breastfeeding education in the middle of pregnancy on the duration of breastfeeding (ABFAB - Attachment to the Breast and Family Attitudes to Breastfeeding).
Participants	Primiparous, English speaking, less than 24 weeks' gestation at recruitment attending Royal Women's Hospital, Melbourne. Not attending Family Birth Centre. Public patient. Participants were allocated to one of three groups (control, intervention 1 or intervention 2) using a computerised system of biased urn randomisation was accessed by telephone (by the research midwife). Women were informed of the randomisation outcome at the time.
Interventions	Intervention 1: a practical skills class for 1.5 hours, mid-pregnancy, focussing on breastfeeding skills, including positioning of the baby and attachment to the breast. This utilised a previously designed and trialled tool and was for women only. Intervention 2: family attitudes class comprising two 1 hour breastfeeding classes mid-pregnancy, exploring attitudes towards breastfeeding and family attitudes to breastfeeding. This was developed and piloted by the investigators, prior to trial commencement. Control group received standard care (not specified).
Outcomes	Breastfeeding initiation and duration rates.
Starting date	Recruitment began in May 1999.
Contact information	Professors Della Forster and Judith Lumley Centre for the Study of Mothers and Childrens Health La Trobe University 251 Faraday Street Carlton Victoria Australia 3053
Notes	Study now completed. Awaiting inclusion of results following publication.

Study	**Muirhead 1997**
Trial name or title	The effect of a specified programme of organised and supervised Peer Support on the initiation and duration of breastfeeding - a randomised controlled trial.

Characteristics of ongoing studies (*Continued*)

Participants	Pregnant women at 28 weeks' gestation recruited from one general practice in Scotland. Women were stratified into four groups by previous feeding experience (primigravidae, previous formula feeder, previously breastfed < 6 weeks, previously breastfed > 6 weeks. Allocation to control (n = 112) or intervention group (n = 113) was by post-recruitment blind randomisation, separate for each of four strata. Randomisation sequences were generated by computer in blocks of five so that the overall number of women allocated to each group could differ by no greater than ten at any point in time. Selection criteria for peer supporters were experienced mothers known to the project team who had previously breastfed and had children under five years. Peer supporters (n = 12) were selected and trained by project researchers.
Interventions	Each participant in the intervention group received at least one visit from one of two matched peer supporters during the antenatal period to introduce themselves. Further antenatal peer support was provided to women who wanted it but there was not set number of visits. Peer supporters had little contact with women in hospital. If a woman was breastfeeding on discharge from hospital, the peer supporter would contact her at least every 2 days or as often as required by phone or a personal visit up until day 28. Further support was provided until 16 weeks if required. Peer supporters were able to consult their supervising professional if required. Women in the control group had access to usual breastfeeding support, namely, health professionals, breastfeeding support groups and/or workshops).
Outcomes	Difference in breastfeeding initiation and duration between the intervention and control groups on an intention-to-treat basis with the four strata pooled. Difference in breastfeeding initiation and duration for each stratum. Differences in time to introduction of formula and/or solids between groups and for each stratum. Qualitative comparisons of women's experiences of breastfeeding, normal support and peer support, Reasons for stopping breastfeeding. Reasons for not getting support. Case reports of breastfeeding problems encountered with solutions.
Starting date	Recruitment began in September 1997.
Contact information	Dr Patricia Muirhead The Oxenwald Surgery 3 Oxenward Road Kilwinning Scotland KA13 6EH
Notes	Study now completed. Awaiting inclusion of results following publication.

ANALYSES

Comparison 01. Health education interventions

Outcome title	No. of studies	No. of participants	Statistical method	Effect size
01 Initiation of breastfeeding	5	582	Relative Risk (Fixed) 95% CI	1.53 [1.25, 1.87]

Comparison 02. Breastfeeding promotion packs

Outcome title	No. of studies	No. of participants	Statistical method	Effect size
01 Initiation of breastfeeding	1	547	Relative Risk (Fixed) 95% CI	0.93 [0.80, 1.08]

Comparison 03. Early mother-infant contact followed by separation

Outcome title	No. of studies	No. of participants	Statistical method	Effect size
01 Initiation of breastfeeding	1	259	Relative Risk (Fixed) 95% CI	1.05 [0.94, 1.17]

INDEX TERMS

Medical Subject Headings (MeSH)

Breast Feeding [*psychology]; *Health Education; Randomized Controlled Trials

MeSH check words

Female; Humans

COVER SHEET

Title	Interventions for promoting the initiation of breastfeeding
Authors	Dyson L, McCormick F, Renfrew MJ
Contribution of author(s)	L Dyson: Primary review author for independent prescreening, data extraction, quality appraisal, analysis and synthesis of findings. F McCormick: Second author for final review preparation, third author for data extraction. Administrative support for retrieval and translation of papers. Professor MJ Renfrew: Second author for independent trawling of titles and abstracts and checking of prescreening, data extraction, quality appraisal, analysis and synthesis of findings.
Issue protocol first published	1999/3
Review first published	2005/2
Date of most recent amendment	27 June 2006
Date of most recent SUBSTANTIVE amendment	14 February 2005
What's New	May 2006 Corrected data error in Graph 01.01 for Brent 1995. No change to conclusions. Search updated. Twenty-four new trial reports added to 'Awaiting assessment' for next update, which is currently being prepared.
Date new studies sought but none found	Information not supplied by author
Date new studies found but not yet included/excluded	30 May 2006
Date new studies found and included/excluded	Information not supplied by author
Date authors' conclusions section amended	Information not supplied by author
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GRAPHS AND OTHER TABLES

Analysis 01.01. Comparison 01 Health education interventions, Outcome 01 Initiation of breastfeeding

Review: Interventions for promoting the initiation of breastfeeding

Comparison: 01 Health education interventions

Outcome: 01 Initiation of breastfeeding

Study	Intervention n/N	Control n/N	Relative Risk (Fixed) 95% CI	Weight (%)	Relative Risk (Fixed) 95% CI
01 Routine breastfeeding education versus one-to-one education and support					
Brent 1995	35/51	18/57		18.2	2.17 [1.42, 3.32]
Subtotal (95% CI)	51	57		18.2	2.17 [1.42, 3.32]
Total events: 35 (Intervention), 18 (Control)					
Test for heterogeneity: not applicable					
Test for overall effect z=3.58 p=0.0003					
02 Routine breastfeeding counselling versus self-help manual					
Coombs 1998	44/104	34/96		37.8	1.19 [0.84, 1.70]
Subtotal (95% CI)	104	96		37.8	1.19 [0.84, 1.70]
Total events: 44 (Intervention), 34 (Control)					
Test for heterogeneity: not applicable					
Test for overall effect z=0.99 p=0.3					
03 Routine breastfeeding classes versus lecture and leaflet					
Hill 1987	19/31	15/33		15.5	1.35 [0.85, 2.15]
Subtotal (95% CI)	31	33		15.5	1.35 [0.85, 2.15]
Total events: 19 (Intervention), 15 (Control)					
Test for heterogeneity: not applicable					
Test for overall effect z=1.25 p=0.2					
04 Routine care versus Best Start video/materials					
Ryser 2004a	14/26	4/28		4.1	3.77 [1.42, 9.99]

(*Continued . . .*)

(. . . *Continued*)

Study	Intervention n/N	Control n/N	Relative Risk (Fixed) 95% CI	Weight (%)	Relative Risk (Fixed) 95% CI
Subtotal (95% CI)	26	28		4.1	3.77 [1.42, 9.99]
Total events: 14 (Intervention), 4 (Control)					
Test for heterogeneity: not applicable					
Test for overall effect z=2.67 p=0.008					
05 Routine care versus paediatric visit					
Serwint 1996	31/81	22/75		24.4	1.30 [0.83, 2.04]
Subtotal (95% CI)	81	75		24.4	1.30 [0.83, 2.04]
Total events: 31 (Intervention), 22 (Control)					
Test for heterogeneity: not applicable					
Test for overall effect z=1.17 p=0.2					
Total (95% CI)	293	289		100.0	1.53 [1.25, 1.87]
Total events: 143 (Intervention), 93 (Control)					
Test for heterogeneity chi-square=8.58 df=4 p=0.07 I^2 =53.4%					
Test for overall effect z=4.11 p=0.00004					

Analysis 02.01. Comparison 02 Breastfeeding promotion packs, Outcome 01 Initiation of breastfeeding

Review: Interventions for promoting the initiation of breastfeeding

Comparison: 02 Breastfeeding promotion packs

Outcome: 01 Initiation of breastfeeding

Study	Intervention n/N	Control n/N	Relative Risk (Fixed) 95% CI	Weight (%)	Relative Risk (Fixed) 95% CI
01 Commercial pack versus breastfeeding promotion pack					
Howard 2000	148/270	163/277		100.0	0.93 [0.80, 1.08]
Total (95% CI)	270	277		100.0	0.93 [0.80, 1.08]
Total events: 148 (Intervention), 163 (Control)					
Test for heterogeneity: not applicable					
Test for overall effect z=0.95 p=0.3					

Analysis 03.01. Comparison 03 Early mother-infant contact followed by separation, Outcome 01 Initiation of breastfeeding

Review: Interventions for promoting the initiation of breastfeeding

Comparison: 03 Early mother-infant contact followed by separation

Outcome: 01 Initiation of breastfeeding