



THE COCHRANE
COLLABORATION®

AUSTRALASIAN SATELLITE OF
THE NEONATAL REVIEW GROUP

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The Neonatal Review

Newsletter of The Australasian Satellite of the
Cochrane Neonatal Review Group

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Latest News

Australian Cochrane funding responsibility transferred to NHMRC

In September 2011 the funding responsibility of the Australasian Satellite of the Cochrane Neonatal Review Group was transferred to the National Health and Medical Research (from the Department of Health and Ageing) as part of the Australian Government's strategic review of the administrative arrangements in the Health and Ageing portfolio. We look forward to working with the NHMRC.

Updating Cochrane neonatal reviews

The Cochrane Neonatal Review Group recently announced that all Cochrane neonatal review updates will result in an updated publication citation. Previously, only review updates that resulted in a substantial change to the review e.g. a change in the conclusion/s of the review were eligible for an updated publication citation. Reviews are to be updated every 2 years. If you would like some assistance with your review update please contact Jann Foster: jann.foster@sydney.edu.au.

Development of Standards for all Cochrane reviews

There has been some evidence (empirical and anecdotal) that Cochrane intervention reviews may vary substantially in their methodological sophistication. The Methods Application and Review Standards Working Group has assumed responsibility along with David Tovey (Cochrane Chief Editor) for a project that aims to specify minimum standards for Cochrane protocols, reviews and updates of reviews on the effects of interventions, and secondly to ensure that these methodological expectations are implemented across the Collaboration.

Australian Cochrane Neonatal Authors Lead the Way

Australian-listed authors contribute to :

- **65%** (49/76) of **all published protocols**
- **56%** (156/277) of **all published reviews**
- **45.1%** (223/494) of **all neonatal full reviews, protocols or title registrations**

Country of Author/	No. of Cochrane reviews (full review, protocol or title registration)	*Percent of total No. reviews
TOTAL	494	100
Australia	223	45.1
USA	108	21.9
UK	100	20.2
Canada	92	18.6
Ireland	23	4.6
India	22	4.4
Malaysia	17	3.4
New Zealand	14	2.8
Netherlands	12	2.4
China	12	2.4
Germany	8	1.6
Pakistan	7	1.2
Saudia Arabia	6	1.2
Turkey	6	1.2
Nigeria	5	1.0
Switzerland	4	0.8
Singapore	3	0.6
Italy	3	0.6
Belgium	3	0.6
Indonesia	3	0.6
Japan	3	0.6
Bahrain	2	0.4
Israel	2	0.4
South Africa	2	0.4
Spain	2	0.4
Uruguay	2	0.4
Argentina	2	0.4
Brazil	2	0.4
Israel	2	0.4
Phillipines	2	0.4
Norway	1	0.2
Portugal	1	0.2
Colombia	1	0.2
Egypt	1	0.2
Greece	1	0.2
Hungary	1	0.2
Iran	1	0.2
Kenya	1	0.2
South Korea	1	0.2
Lebanon	1	0.2
Sweden	1	0.2
United Arab Emirates	1	0.2
TOTAL	704	

No of reviews, protocols or title registrations with an author/co-author from the listed country

*Please note: Some reviews have authors from several different countries

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New Cochrane Neonatal Title Registrations & Protocols: Australasian authors (Issue 10, 2011 to Issue 9 2010)

Title	Authors	Issue
EFFECT OF POSITION DURING BOTTLE FEEDING ON PHYSIOLOGICAL STABILITY FOR PRETERM INFANTS	DAWSON J. FOSTER J.	TITLE REGISTRATION AUGUST 2011
HOME VERSUS HOSPITAL BASED PHOTOTHERAPY FOR THE TREATMENT OF NON-HAEMOLYTIC JAUNDICE IN INFANTS MORE THAN 37 WEEKS GESTATION	MALWADE U. JARDINE L.	TITLE REGISTRATION MAY 2011
PROBIOTICS FOR COLIC IN NEONATES AND INFANTS	PRAVEEN V. PRAVEEN S. DESHPANDE G.	TITLE REGISTRATION MAY 2011
LUNG RECRUITMENT MANOEUVRES IN MECHANICALLY VENTILATED NEONATES FOR REDUCING RESPIRATORY MORBIDITY IN TERM NEONATES	JAUNCEY-COOKE J, BOGOSSIAN F, HOUGH JL, SCHIBLER A, DAVIES MW, GRANT CA, EAST CE, GIBBONS K.	TITLE REGISTRATION: NOVEMBER 2010
EXCHANGE TRANSFUSION AS AN ADJUNCTIVE THERAPY FOR TREATMENT OF SEVERE SEPSIS IN NEONATES	MISHRA S, CHAWLA D, AGARWAL R.	TITLE REGISTRATION: NOVEMBER 2010
ASSESSMENT OF CORRECT TUBE PLACEMENT FOR NEONATES REQUIRING INTUBATION	SCHMOLZER GM, GOEHR C.	TITLE REGISTRATION: NOVEMBER 2010
LIVE VERSUS DEAD PROBIOTICS SUPPLEMENTATION FOR PRETERM INFANTS (< 37 WEEKS)	DESHPANDE G, PATOLE SK.	TITLE REGISTRATION: OCTOBER 2010
LUNG RECRUITMENT MANOEUVRES FOR REDUCING RESPIRATORY MORBIDITY IN MECHANICALLY VENTILATED PRETERM INFANTS	HOUGH JL, JAUNCEY-COOKE J, DAVIS MW, JARDINE LA.	TITLE REGISTRATION: OCTOBER 2010
SOY OIL BASED VS. ALTERNATIVE LIPID EMULSIONS FOR PARENTERALLY FED PRETERM INFANTS	KAPOOR V. GLOVER R.	NEW PROTOCOL ISSUE 6, 2011
NASAL AIRWAYS (SINGLE OR DOUBLE PRONG, LONG OR SHORT) FOR NEONATAL RESUSCITATION	MCCARTHY LK DAVIS PG O'DONNELL C	NEW PROTOCOL ISSUE 5, 2011
RECOMBINANT ACTIVATED FACTOR VII FOR PREVENTION AND TREATMENT OF INTRAVENTRICULAR HAEMORRHAGE IN NEONATES	MALHOTRA A. VELDMAN A.	NEW PROTOCOL: ISSUE 3, 2011
FOLIC ACID SUPPLEMENTATION FOR THE PREVENTION OF ANAEMIA IN PRETERM INFANTS	HO JJ, CHUN WEARN KOH, CHANG ASM.	NEW PROTOCOL: ISSUE 3, 2011
EARLY VERSUS LATE ADMINISTRATION OF AMINO ACIDS IN PRETERM INFANTS RECEIVING PARENTERAL NUTRITION	TRIVEDI A. SINN J.	NEW PROTOCOL: ISSUE 10, 2010

**New Cochrane Reviews/Review Updates:
Australasian authors (Issue 10, 2011 to Issue 9, 2010)**

Title	Authors	Issue
SCREENING PROGRAMMES FOR DEVELOPMENTAL DYSPLASIA OF THE HIP IN NEWBORN INFANTS	SHORTER D. HONG T. OSBORN DA	NEW REVIEW: ISSUE 9, 2011
Key finding/s:		
<p>No study examined the effect of screening (clinical and/or ultrasound) and early treatment versus not screening and later treatment. One study reported universal ultrasound compared to clinical examination alone did not result in a significant reduction in late diagnosed DDH or surgery but was associated with a significant increase in treatment. One study reported targeted ultrasound compared to clinical examination alone did not result in a significant reduction in late diagnosed DDH or surgery, with no significant difference in rate of treatment. Meta-analysis of two studies found universal ultrasound compared to targeted ultrasound did not result in a significant reduction in late diagnosed DDH or surgery. There was heterogeneity between studies reporting the effect on treatment rate. Meta-analysis of two studies found delayed ultrasound and targeted splinting compared to immediate splinting of infants with unstable (but not dislocated) hips resulted in no significant difference in the rate of late diagnosed DDH. Both studies reported a significant reduction in treatment with use of delayed ultrasound and targeted splinting. One study reported delayed ultrasound and targeted splinting compared to immediate splinting of infants with mild hip dysplasia on ultrasound resulted in no significant difference in late diagnosed DDH but a significant reduction in treatment. No infants in either group received surgery. There is insufficient evidence to give clear recommendations for practice.</p> <p>Author's conclusions</p> <p>There is inconsistent evidence that universal ultrasound results in a significant increase in treatment compared to the use of targeted ultrasound or clinical examination alone. Neither of the ultrasound strategies have been demonstrated to improve clinical outcomes including late diagnosed DDH and surgery. The studies are substantially underpowered to detect significant differences in the uncommon event of late detected DDH or surgery. For infants with unstable hips or mildly dysplastic hips, use of delayed ultrasound and targeted splinting reduces treatment without significantly increasing the rate of late diagnosed DDH or surgery.</p>		
LARYNGEAL MASK AIRWAY SURFACTANT ADMINISTRATION FOR PREVENTION OF MORBIDITY AND MORTALITY IN PRETERM INFANTS WITH OR AT RISK OF	ABDEL-LATIF ME. OSBORN DA.	NEW REVIEW: ISSUE 7, 2011
Key finding/s:		
<p>We found no studies of prophylactic or early LMA surfactant administration. A single small study of late rescue LMA surfactant was identified as eligible for inclusion. The study enrolled 26 preterm infants born ≥ 1200 g with RDS on continuous positive airway pressure (nCPAP). LMA surfactant administration compared to no treatment resulted in a reduction in mean FiO₂ required to maintain oxygen saturation between 88% and 92% for 12 hours after the intervention. No significant difference was reported in subsequent mechanical ventilation and endotracheal surfactant, pneumothorax, days on intermittent positive airway pressure (IPPV), and days on IPPV or oxygen.</p> <p>Authors' conclusions</p> <p>There is evidence from a single small trial that LMA surfactant administration in preterm infants ≥ 1200 g with established RDS may have a short term effect in reducing oxygen requirements although the study is underpowered to detect important clinical effects. Adequately powered trials are required to determine the effect of LMA surfactant administration for prevention or treatment of RDS in preterm infants. LMA surfactant administration should be limited to clinical trials.</p>		

**New Cochrane Reviews/Review Updates:
Australasian authors (Issue 10, 2011 to Issue 9, 2010)**

Title	Authors	Issue
PERITONEAL DRAINAGE VS LAPAROTOMY AS INITIAL SURGICAL TREATMENT FOR PERFORATED NECROTIZING ENTEROCOLITIS OR SPONTANEOUS INTESTINAL PERFORATION IN PRETERM LOW BIRTH WEIGHT INFANTS	RAO SC, BASANI L SIMMER K, SAMNAKAY N DESHPANDE G	NEW REVIEW: ISSUE 6, 2011
Key finding/s:		
<p>Only two randomised controlled trials (RCT) met the eligibility criteria. Overall, no significant differences were seen between the peritoneal drainage and laparotomy groups regarding the incidence of mortality within 28 days of the primary procedure (28/90 versus 30/95; typical relative risk (RR) 0.99, 95% CI 0.64 to 1.52; N = 185, two trials); mortality by 90 days after the primary procedure (typical RR 1.05, 95% CI 0.71 to 1.55; N = 185, two trials) and the number of infants needing total parenteral nutrition for more than 90 days (typical RR 1.18, 95% CI 0.72 to 1.95; N = 116, two trials). Nearly 50% of the infants in the peritoneal drainage group could avoid the need for laparotomy during the study period (44/90 versus 95/96; typical RR 0.49, 95% CI 0.39 to 0.61; N = 186, two trials). One study found that the time to attain full enteral feeds in infants \leq 1000 g was prolonged in the peritoneal drainage group (mean difference (MD) 20.77, 95% CI 3.62 to 37.92). Evidence from two RCTs suggests no significant benefits or harms of peritoneal drainage over laparotomy. However, due to the very small sample size, clinically significant differences may have easily been missed. No firm recommendations can be made for clinicians. Large multicentre randomised controlled trials are needed to address this question definitively.</p>		
HIGH FLOW NASAL CANNULA RESPIRATORY SUPPORT IN PRETERM INFANTS	WILKINSON D ANDERSEN C, DE PAOLI AG	NEW REVIEW: ISSUE 5, 2011
Key finding/s:		
<p>Four studies were identified for inclusion in the review. The studies differed in the interventions compared (nasal continuous positive airway pressure (CPAP), humidified HFNC, non-humidified HFNC), the flow rates provided and the indications for respiratory support. Meta-analysis and subgroup analysis were not possible. When used as primary respiratory support after birth, one trial found similar rates of treatment failure in infants treated with HFNC and nasal CPAP. Following extubation, one trial found that infants treated with HFNC had a significantly higher rate of reintubation than those treated with nasal CPAP. Another trial found similar rates of reintubation for humidified and non-humidified HFNC, and the fourth trial found no difference between two different models of equipment used to deliver humidified HFNC.</p> <p>There is insufficient evidence to establish the safety or effectiveness of HFNC as a form of respiratory support in preterm infants. When used following extubation, HFNC may be associated with a higher rate of reintubation than nasal CPAP. Further adequately powered randomised controlled trials should be undertaken in preterm infants comparing HFNC with nasal CPAP and with other means of respiratory support; or of support following extubation. These trials should measure clinically important outcomes.</p>		
INTRATRACHEAL CLARA CELL SECRETORY PROTEIN (CCSP) ADMINISTRATION IN PRETERM INFANTS WITH OR AT RISK OF RESPIRATORY DISTRESS SYNDROME	ABDEL-LATIF ME OSBORN DA	NEW REVIEW: ISSUE 5, 2011
Key finding/s:		
<p>One pilot study was identified and included. This study enrolled 22 preterm infants 700 to 1300g with established RDS who required ventilation for surfactant administration. Infants received one intratracheal dose of placebo (n = 7), 1.5 mg/kg (n = 8) or 5 mg/kg (n = 7) rhCC10 within four hours of surfactant treatment. At either dose of rhCC10, no significant difference was reported in CLD (36 weeks postmenstrual age or 28 days), mortality, intraventricular haemorrhage, periventricular leukomalacia, patent ductus arteriosus, necrotising enterocolitis, sepsis or days supplemental oxygen compared to placebo. A significant increase in days mechanical ventilation was reported for infants receiving rhCC10 5mg/kg (mean difference 12.00, 95% confidence interval 0.39 to 23.61) but not at the lower dose. The study reported that a single intratracheal dose of rhCC10 was well tolerated and resulted in a significant reduction in tracheal aspirate neutrophil and total cell count, and lung protein concentration. There was no significant difference reported in tracheal aspirate cytokine levels between groups. There are insufficient data to determine the role of rhCC10 in clinical practice. Further studies are required to determine if rhCC10 reduces lung inflammation in infants at risk of CLD, and to determine dose and dosing strategy.</p>		

New Cochrane Reviews/Review Updates: Australasian authors (Issue 10, 2011 to Issue 9, 2010)

Title	Authors	Issue
PHARYNGEAL INSTILLATION OF SURFACTANT BEFORE THE FIRST BREATH FOR PREVENTION OF MORBIDITY AND MORTALITY IN PRETERM INFANTS AT RISK OF RESPIRATORY DISTRESS SYNDROME	ABDEL-LATIF ME, OSBORN DA.	NEW REVIEW: ISSUE 3, 2011
Key finding/s: No published, unpublished or ongoing trials that met the inclusion criteria for this review were found.		
Authors' conclusions There were no data from randomised controlled or quasi-randomised trials that evaluated the effect of intrapartum instillation of pharyngeal surfactant before the first breath. Evidence from animal and observational human studies suggest that pharyngeal instillation of surfactant before the first breath is potentially safe, feasible and may be effective. Well designed trials are needed.		
STRATEGIES FOR THE WITHDRAWAL OF NASAL CONTINUOUS POSITIVE AIRWAY PRESSURE (NCPAP) IN PRETERM INFANTS	JARDINE LA, INGLIS GDT, DAVIES MW.	NEW REVIEW: ISSUE 3, 2011
Key finding/s: We identified four potentially eligible studies. Three studies are included in this review. One study showed a significant decrease in the duration of oxygen therapy and a significantly decreased length of stay for babies randomised to a weaning strategy where NCPAP is simply stopped when infants met predefined stability criteria.		
Authors' conclusions Infants who have their NCPAP pressure weaned to a predefined level and then stop NCPAP completely have less total time on NCPAP and shorter durations of oxygen therapy and hospital stay compared with those that have NCPAP removed for a predetermined number of hours each day. Future trials of withdrawing NCPAP should compare proposed strategies with weaning NCPAP pressure to a predefined level and then stopping NCPAP completely. Clear criteria need to be established for the definition of stability prior to attempting to withdraw NCPAP.		
TRANSFER OF PRETERM INFANTS FROM INCUBATOR TO OPEN COT AT LOWER VS. HIGHER BODY WEIGHT	NEW K. FLENADY V, DAVIES MW.	REVIEW UPDATE: ISSUE 9, 2011
Key finding/s: Four eligible studies were identified. Two of the identified trials were assessed as having good methodological quality. Two studies reported daily weight gain (calculated as growth velocity); the lower body weight group had a significantly greater daily weight gain [pooled mean difference (MD) 2.66 (95% confidence interval (CI) 1.37 to 3.95). One study reported a larger proportion of infants transferred at the higher body weight had an episode of low temperature in the first 72 hours; while no difference between the two groups was found in the proportion of infants experiencing cold stress post-transfer to discharge. Two studies report no difference between the two groups in requiring an overhead heater for temperature maintenance [pooled RR 1.43 (95% CI 0.35 to 1.18). No statistically significant difference was shown for proportion of infants returning to an incubator [three studies (N = 336) [pooled RR 1.78 (95% CI 0.77 to 4.08)].		
Two studies report there was no statistically significant difference in time spent in an open cot post transfer to discharge; while one study found infants transferred at lower weights had a significantly reduced length of stay [MD -9.00 (95% CI -13.29 to -4.71), a second study found no differences between the two groups [MD 0.30 (95% CI -5.11 to 5.71). In these two studies not breastfeeding at discharge was not significantly different between the lower and higher body weight groups [pooled RR 1.02 (95% CI 0.69 to 1.51).		
Authors' conclusions Medically stable preterm infants can be transferred to unheated open cots at a lower body weight of 1600 grams without adverse effects on temperature stability or weight gain. Earlier transfer does not necessarily result in earlier discharge.		

New Cochrane Reviews/Review Updates: Australasian authors (Issue 10, 2011 to Issue 9, 2010)

Title	Authors	Issue
INTRAVENOUS IN-LINE FILTERS FOR PREVENTING MORBIDITY AND MORTALITY IN NEONATES	FOSTER JP, RICHARDS R SHOWELL M	REVIEW UPDATE: ISSUE 9, 2011
<p>Key finding/s:</p> <p>There were four eligible studies that recruited a total of 704 neonates. This review found no significant effect of in-line filters in any of the reported outcomes of overall mortality, proven and suspect septicaemia, local phlebitis and thrombus, necrotizing enterocolitis, duration of cannula patency, length of stay in hospital, number of catheters inserted and financial costs.</p> <p>Authors' conclusions</p> <p>There is insufficient evidence to recommend the use of intravenous in-line filters to prevent morbidity and mortality in neonates.</p>		
COT-NURSING VS. INCUBATOR CARE FOR PRETERM INFANTS	GRAY PH FLENADY V	REVIEW UPDATE: ISSUE 8, 2011
<p>Key finding/s:</p> <p>Eleven potential studies were identified of which five, involving 247 infants, were included in this review. When compared to incubator care, cot-nursing resulted in no significant difference in mean body temperature (MD 0.02 degrees C; 95% CI -0.02 to 0.07, four trials), though the one trial that reported on episodes of hyperthermia found this to be statistically more common in the cot-nursing group (RR 1.48; 95% CI 1.04 to 2.09). There were no statistically significant differences in weight gain. In the cot-nursing group, fewer infants were breast fed on discharge (typical RR 0.74; 95% CI 0.48 to 1.14, three trials, 150 infants) and fewer infants died prior to hospital discharge (typical RR 0.59, 95% CI 0.28 to 1.25, four trials, 235 infants) but these results failed to reach statistical significance. The comparison of cot-nursing using a heated water-filled mattress versus incubator care, which included five trials and a total of 231 infants, produced similar results. Cot-nursing with warming of the nursery resulted in statistically significantly smaller weight gain during week one compared to the incubator group in one trial that involved 38 infants (MD -5.90 g/kg/day; 95% CI -11.13 to -0.67) but no significant difference was found for weeks two and three.</p> <p>Authors' conclusions</p> <p>Cot-nursing using a heated water-filled mattress has similar effects to incubator care with regard to temperature control and weight gain. Important clinical outcomes need to be investigated further using randomised controlled trials. This is especially the case in the situation of developing countries, where differences in these outcomes are likely to be encountered. As limited data is available on cotnursing using a space-heated room, this method is not recommended as practice.</p>		
PROPHYLACTIC CAFFEINE TO PREVENT POSTOPERATIVE APNOEA FOLLOWING GENERAL ANAESTHESIA IN PRETERM INFANTS	HENDERSON-SMART DJ STEER PA	REVIEW UPDATE: ISSUE 7, 2011
<p>Three eligible trials were found. In each trial apnoea/bradycardia occurred in fewer infants treated with caffeine. The typical estimate for relative risk is 0.09 (95% CI 0.02 to 0.34). The typical estimate for absolute risk difference is -0.58 (95% CI -0.74 to -0.43) indicating that fewer than two infants have to be treated with caffeine to expect to prevent one with postoperative apnoea. In two trials (Welborn 1989; LeBard 1989), continuous recordings of oxygen saturation detected hypoxaemic episodes (< 90%) in fewer treatment than control infants [typical RR 0.13 (95% CI 0.03 to 0.63)]. No infant in any trial required intubation and mechanical ventilation. No adverse effects were reported.</p> <p>Authors' conclusions</p> <p>Implications for practice. After general anaesthesia, caffeine can be used to prevent postoperative apnoea/bradycardia and episodes of oxygen desaturation in growing preterm infants if this is deemed clinically necessary. In view of the small numbers of infants studied in these trials and uncertainty concerning the clinical significance of the episodes, caution is warranted in applying these results to routine clinical practice. Implications for research. There is a need to determine which infants might benefit most by this treatment. Studies confined to those most at risk of apnoea (prior history, younger postmenstrual age) and those that might require mechanical ventilation or chronic lung disease would be of value.</p>		

**New Cochrane Reviews/Review Updates:
Australasian authors (Issue 10, 2011 to Issue 9, 2010)**

Title	Authors	Issue
ORAL IMMUNOGLOBULIN FOR PREVENTING NECROTIZING ENTEROCOLITIS IN PRETERM AND LOW BIRTH WEIGHT NEONATES	FOSTER JP COLE MJ	REVIEW UPDATE: ISSUE 7, 2011
<p>Key finding/s: Five studies on oral immunoglobulin for the prevention of necrotizing enterocolitis were identified of which three met the inclusion criteria. In this review of the three eligible trials (including a total of 2095 neonates), the oral administration of IgG or an IgG/IgA combination did not result in a significant reduction in the incidence of definite NEC [typical RR 0.84 (95% CI 0.57 to 1.25), typical RD -0.01 (95% CI -0.03 to 0.01)], suspected NEC [RR 0.84 (95% CI 0.49 to 1.46), RD -0.01 (95% CI -0.02 to 0.01)], need for surgery [typical RR 0.21 (95% CI 0.02 to 1.75), typical RD -0.03 (95% CI -0.06 to 0.00)] or death from NEC [typical RR 1.10 (95% CI 0.47 to 2.59), typical RD 0.00 (95% CI -0.01 to 0.01)].</p> <p>Authors' conclusions Based on the available trials, the evidence does not support the administration of oral immunoglobulin for the prevention of NEC. There are no randomised controlled trials of oral IgA alone for the prevention of NEC.</p>		
DEEP VS. SHALLOW SUCTION OF ENDOTRACHEAL TUBES IN VENTILATED NEONATES AND YOUNG INFANTS	GILLIES D SPENCE K	REVIEW UPDATE: ISSUE 7, 2011
<p>Key finding/s: One small crossover trial (n = 27) of shallow versus deep suctioning met the criteria for inclusion in this review. The reported outcomes were oxygen saturation and heart rate, during and after suctioning. There were no significant differences when shallow and deep suctioning methods were compared.</p> <p>Authors' conclusions There is no evidence from randomised controlled trials concerning the benefits or risks of deep versus shallow suctioning of endotracheal tubes in ventilated neonates and infants. Further high quality research is required.</p>		
GOWNING BY ATTENDANTS AND VISITORS IN NEWBORN NURSERIES FOR PREVENTION OF NEONATAL MORBIDITY AND MORTALITY	WEBSTER J, PRITCHARD MA.	REVIEW UPDATE: ISSUE 4, 2011
<p>Key finding/s: Eight trials were included, reporting outcomes for 3,811 infants. Trial quality varied, with only two assessed as being of good quality. Not wearing overgowns was associated with a trend to reduction in the death rate (typical RR 0.84, 95% CI 0.70 to 1.02) compared to wearing overgowns, but these results did not reach statistical significance. There was no statistically significant effect of gowning policy on incidence of systemic nosocomial infection, (typical RR 1.24, 95% CI 0.90 to 1.71). The overall analysis showed no significant effects of gowning policy on the incidence of colonisation, length of hospital stay or handwashing frequency. No trials of visitor gowning were found.</p> <p>Authors' conclusions There is no evidence from this systematic review and meta-analysis to demonstrate that overgowns are effective in limiting death, infection or bacterial colonisation in infants admitted to newborn nurseries.</p>		

**New Cochrane Review Updates:
Australasian authors (Issue 10, 2011 to Issue 9, 2010)**

Title	Authors	Issue
INCREASED ENERGY INTAKE FOR PRETERM INFANTS WITH (OR DEVELOPING) BRONCHOPULMONARY DYSPLASIA/CHRONIC LUNG DISEASE	NAI MING L, RAJADURAI SV, TAN K.	REVIEW UPDATE: ISSUE 4, 2011
<p>Key finding/s:</p> <p>Fourteen studies that appeared to be relevant were excluded, as no study directly compared increased versus standard energy intakes in infants with CLD/BPD. However, two excluded trials provided some insights into the topic. One study showed that infants with CLD/BPD who were fed formula enriched with protein and minerals had improved growth parameters up until the cessation of the intervention at three months of corrected age. The other study compared different energy density of formula but identical energy intake by setting different feed volumes for both groups. It showed that both groups were unable to achieve the pre-designated feed volumes and that there were no differences in growth, respiratory outcomes, oedema and the diuretic requirements.</p> <p>Authors conclusion/s:</p> <p>To date, no randomised controlled trials are available that examine the effects of increased versus standard energy intake for preterm infants with (or developing) CLD/BPD. Research should be directed at evaluating the effects of various levels of energy intake on this group of infants on clinically important outcomes like mortality, respiratory status, growth and neurodevelopment. The benefits and harms of various ways of increasing energy intake, including higher energy density of milk feed and/or fluid volume (clinically realistic target volume should be set), parenteral nutrition, and the use of various constituents of energy like carbohydrate, protein and fat for this purpose also need to be assessed.</p>		
SELENIUM SUPPLEMENTATION TO PREVENT SHORT-TERM MORBIDITY IN PRETERM INFANTS	DARLOW BA, AUSTIN N. (NZ)	REVIEW UPDATE: ISSUE 2, 2011
<p>Key finding/s:</p> <p>Three eligible trials were identified. Two trials, including one trial with a much larger sample size than the others combined, were from geographical areas with low population selenium concentrations. Meta-analysis of the pooled data showed a significant reduction in the proportion of infants having one or more episodes of sepsis associated with selenium supplementation [summary RR 0.73 (0.57 to 0.93); RD -0.10 (-0.17 to -0.02); NNT 10 (5.9 to 50)]. Supplementation with selenium was not associated with improved survival, a reduction in neonatal chronic lung disease or retinopathy of prematurity.</p> <p>Authors conclusion/s:</p> <p>Supplementing very preterm infants with selenium is associated with benefit in terms of a reduction in one or more episodes of sepsis. Supplementation was not associated with improved survival, a reduction in neonatal chronic lung disease or retinopathy of prematurity. Supplemental doses of selenium for infants on parenteral nutrition higher than those currently recommended may be beneficial. The data are dominated by one large trial from a country with low selenium concentrations and may not be readily translated to other populations.</p>		



**New Cochrane Review Updates:
Australasian authors (Issue 10, 2011 to Issue 9, 2010)**

Title	Authors	Issue
PROPHYLACTIC ANTIBIOTICS TO REDUCE MORBIDITY AND MORTALITY IN NEONATES WITH UMBILICAL VENOUS CATHETERS	ENGLISH GDT, JARDINE LA, DAVIES MW.	REVIEW UPDATE: ISSUE 2, 2011
<p>Key finding/s:</p> <p>One poor quality study met the criteria for inclusion in this review. Twenty-nine term infants, who had UVCs inserted specifically for transfusion procedures for hyperbilirubinaemia or polycythaemia, allocated non-randomly (alternate allocation) to treatment (n = 15) or control (n = 14) groups. Those in the treatment group received penicillin and gentamicin for three days. 5/15 infants given antibiotics and 5/14 control infants having positive blood cultures three days after catheter insertion. All positive blood cultures were considered contaminated, due to lack of corroborating clinical and haematological evidence of infection. Therefore, no infants were identified with evidence of septicaemia.</p> <p>Authors' conclusions</p> <p>There is insufficient evidence from randomised trials to support or refute the use of prophylactic antibiotics when UVCs are inserted in newborn infants. There is no evidence to support or refute continuing antibiotics once initial cultures rule out infection in newborn infants with UVCs.</p>		
PROPHYLACTIC ANTIBIOTICS TO REDUCE MORBIDITY AND MORTALITY IN VENTILATED NEWBORN INFANTS	INGLIS GDT, DAVIES MW.	REVIEW UPDATE: ISSUE 2, 2011
<p>Key finding/s:</p> <p>Two studies met the criteria for inclusion in this review. One was of insufficient quality to draw any meaningful conclusions. The other was of fair quality and found no significant differences between treatment and control groups in any of the reported outcomes, however, the rates of septicaemia were not reported.</p> <p>Authors' conclusions</p> <p>There is insufficient evidence from randomised trials to support or refute the use of prophylactic antibiotics when starting mechanical ventilation in newborn infants, or to support or refute continuing antibiotics once initial cultures have ruled out infection in mechanically ventilated newborn infants.</p>		
PROPHYLACTIC ANTIBIOTICS TO REDUCE MORBIDITY AND MORTALITY IN NEONATES WITH UMBILICAL ARTERY CATHETERS	INGLIS GDT, JARDINE LA, DAVIES MW.	REVIEW UPDATE: ISSUE 2, 2011
<p>Key finding/s:</p> <p>Two quasi-randomised trials have been included. However, given their poor quality, we have not pooled the results. There were no statistically significant differences in important outcomes in either study.</p> <p>Authors' conclusions</p> <p>There is insufficient evidence from randomised trials to support or refute the use of prophylactic antibiotics when umbilical artery catheters are inserted in newborn infants, and no evidence to support or refute continuing antibiotics once initial cultures rule out infection in newborn infants with umbilical artery catheters.</p>		

New Cochrane Review Updates:
Australasian authors (Issue 10, 2011 to Issue 9, 2010)

Title	Authors	Issue
EPINEPHRINE FOR THE RESUSCITATION OF APPARENTLY STILLBORN OR EXTREMELY BRADYCARDIC NEWBORN INFANTS	ZIINO A, DAVIES MW, DAVIS PG.	REVIEW UPDATE: ISSUE 2, 2011
<p>Key finding/s: No studies were found meeting the criteria for inclusion in this review.</p> <p>Authors' conclusions No randomised, controlled trials evaluating the administration of epinephrine to the apparently stillborn or extremely bradycardic newborn infant were found. Similarly, no randomised, controlled trials that addressed the issues of optimum dosage and route of administration of epinephrine were found. Current recommendations for the use of epinephrine in newborn infants are based only on evidence derived from animal models and the human adult literature. Randomised trials in neonates are urgently required to determine the role of epinephrine in this population.</p>		
LONGCHAIN POLYUNSATURATED FATTY ACID SUPPLEMENTATION IN PRETERM INFANTS	SVEN M, SCHULZKE SM, PATOLE SK, SIMMER K.	REVIEW UPDATE: ISSUE 2, 2011
<p>Key finding/s: Of the 17 trials included in the review, 13 were classified as of high quality.</p> <p>Visual acuity: Visual acuity over the first year was measured by Teller or Lea acuity cards in eight studies, by VEP in six studies and by ERG in two studies. Most studies found no significant differences in visual assessment between supplemented and control infants.</p> <p>Development: Three out of seven studies reported some benefit of LCPUFA on neurodevelopment in different populations at different postnatal ages. Meta-analysis of Bayley Scales of Infant Development of four studies at 12 months (N = 364) and three studies at 18 months (N = 494) post-term showed no significant effect of supplementation on neurodevelopment.</p> <p>Growth: Four out of 15 studies reported benefits of LCPUFA on growth of supplemented infants at different postnatal ages. Two trials suggested that LCPUFA supplemented infants grow less well than controls. One trial reported mild reductions in length and weight z scores at 18 months. Meta-analysis of five studies showed increased weight and length at two months post-term in supplemented infants. Meta-analysis of four studies at 12 months (N = 271) and two studies at 18 months (N = 396) post-term showed no significant effect of supplementation on weight, length or head circumference.</p> <p>Authors' conclusions Infants enrolled in the trials were relatively mature and healthy preterm infants. Assessment schedule and methodology, dose and source of supplementation and fatty acid composition of the control formula varied between trials. On pooling of results, no clear long-term benefits or harms were demonstrated for preterm infants receiving LCPUFA-supplemented formula.</p>		



New Cochrane Review Updates: Australasian authors (Issue 10,2011 to Issue 9, 2010)

Title	Authors	Issue
PROPHYLACTIC METHYLXANTHINES FOR PREVENTION OF APNOEA IN PRETERM INFANTS	HENDERSON-SMART D, DE PAOLI AG	REVIEW UPDATE: ISSUE 1, 2011
<p>Key finding/s:</p> <p>Three studies were eligible for inclusion in the review. Two small studies (randomising a total of 104 infants) evaluated the effect of prophylactic caffeine on short term outcomes. There were no meaningful differences between the caffeine and placebo groups in the number of infants with apnoea, bradycardia, hypoxaemic episodes, use of IPPV or side effects in either of the studies. Only two outcomes (use of IPPV and tachycardia) were common to the two studies and meta-analysis showed no substantive differences between the groups. One large trial of caffeine therapy (CAP 2006) in a heterogeneous group of infants at risk for and having apnoea of prematurity demonstrated an improved rate of survival without developmental disability at 18 to 21 months corrected age. The reports of the subgroup of infants treated with prophylactic caffeine did not demonstrate any significant differences in clinical outcomes except for a decrease in the risk of PDA ligation.</p> <p>Authors' conclusions</p> <p>The results of this review do not support the use of prophylactic caffeine for preterm infants at risk of apnoea. Any future studies need to examine the effects of prophylactic methylxanthines in preterm infants at higher risk of apnoea. This should include examination of important clinical outcomes such as need for IPPV, neonatal morbidity, length of hospital stay and long term development.</p>		
PROPHYLACTIC METHYLXANTHINES FOR ENDOTRACHEAL EXTUBATION IN PRETERM INFANTS	HENDERSON-SMART D, DE PAOLI AG.	REVIEW UPDATE ISSUE 1, 2011
<p>Key finding/s:</p> <p>Seven studies were identified for inclusion. Methylxanthine treatment results in a reduction in failure of extubation within one week (summary RR 0.48, 95%CI 0.32 to 0.71; summary RD -0.27, 95%CI -0.39 to -0.15; NNT 4, 95%CI 3 to 7; six trials, 172 infants). There is significant heterogeneity in the RD meta-analysis perhaps related to the large variation in baseline rate in the control groups (range 20 to 100%). The CAP trial enrolled the largest number of infants, but did not report extubation rates. In the caffeine group, there were lower rates of bronchopulmonary dysplasia, PDA ligation, cerebral palsy and death or major disability at 18 to 21 months. Infants receiving caffeine had reduced postmenstrual ages at time of discontinuing oxygen therapy, positive pressure ventilation and endotracheal intubation.</p> <p>Authors' conclusions</p> <p>Methylxanthines increase the chances of successful extubation of preterm infants within one week of age. Important neurodevelopmental outcomes are improved by methylxanthine therapy. In any future trials, there is a need to stratify infants by gestational age (a better indicator of immaturity than birth weight). Caffeine, with its wider therapeutic margin, would be the better treatment to evaluate against placebo.</p>		
VOLUME-TARGETED VERSUS PRESSURE-LIMITED VENTILATION IN THE NEONATE	WHEELER K, KLINGENBERG C, MCCALLION N, MORLEY CJ. DAVIS PG.	REVIEW UPDATE: ISSUE 11, 2010
<p>Key finding/s:</p> <p>Twelve randomised trials met our inclusion criteria; nine parallel trials (629 infants) and three crossover trials (64 infants). The use of VTV modes resulted in a reduction in the combined outcome of death or bronchopulmonary dysplasia [typical RR 0.73 (95% CI 0.57 to 0.93), NNT 8 (95% CI 5 to 33)]. VTV modes also resulted in reductions in pneumothorax [typical RR 0.46 (95% CI 0.25 to 0.84), NNT 17 (95% CI 10 to 100)], days of ventilation [MD -2.36 (95% CI -3.9 to -0.8)], hypocarbia [typical RR 0.56 (95%CI 0.33 to 0.96), NNT 4 (95% CI 2 to 25)] and the combined outcome of periventricular leukomalacia or grade 3-4 intraventricular haemorrhage [typical RR 0.48 (95% CI 0.28 to 0.84), NNT 11 (95% CI 7 to 50)].</p> <p>Authors' conclusions</p> <p>Infants ventilated using VTV modes had reduced death and chronic lung disease compared with infants ventilated using PLV modes. Further studies are needed to identify whether VTV modes improve neurodevelopmental outcomes and to compare and refine VTV strategies.</p>		

**New Cochrane Review Updates:
Australasian authors (Issue 10, 2011 to Issue 9, 2010)**

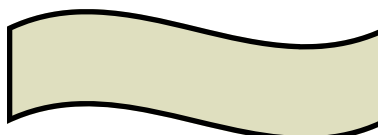
Title	Authors	Issue
OPIATE TREATMENT FOR OPIATE WITHDRAWAL IN NEWBORN INFANTS	OSBORN DA, JEFFERY HE, COLE MJ.	REVIEW UPDATE: ISSUE 10, 2010
<p>Key finding/s:</p> <p>Nine studies enrolling 645 infants met inclusion criteria. There were substantial methodological concerns in all studies comparing an opiate with a sedative. Two small studies comparing different opiates were of good methodology. Opiate (morphine) versus supportive care (one study): A reduction in time to regain birth weight and duration of supportive care and a significant increase in hospital stay was noted. Opiate versus phenobarbitone (four studies): Meta-analysis found no significant difference in treatment failure. One study reported opiate treatment resulted in a significant reduction in treatment failure in infants of mothers using only opiates. One study reported a significant reduction in days treatment and admission to the nursery for infants receiving morphine. One study reported a reduction in seizures, of borderline statistical significance, with the use of opiate. Opiate versus diazepam (two studies): Meta-analysis found a significant reduction in treatment failure with the use of opiate. Different opiates (six studies): there is insufficient data to determine safety or efficacy of any specific opiate compared to another opiate.</p> <p>Authors' conclusions</p> <p>Opiates compared to supportive care may reduce time to regain birth weight and duration of supportive care but increase duration of hospital stay. When compared to phenobarbitone, opiates may reduce the incidence of seizures but there is no evidence of effect on treatment failure. One study reported a reduction in duration of treatment and nursery admission for infants on morphine. Compared to diazepam, opiates reduce the incidence of treatment failure. A post-hoc analysis generates the hypothesis that initial opiate treatment may be restricted to infants of mothers who used opiates only. In view of the methodologic limitations of the included studies the conclusions of this review should be treated with caution.</p>		
SEDATIVE FOR OPIATE WITHDRAWAL IN NEWBORN INFANTS	OSBORN DA, JEFFERY H, COLE MJ.	REVIEW UPDATE: ISSUE 10, 2010
<p>Key finding/s:</p> <p>Seven studies enrolling 385 patients were included. There were substantial methodological concerns for most studies including the use of quasi-random allocation methods and sizeable, largely unexplained differences in reported numbers allocated to each group. One study reported phenobarbitone compared to supportive care alone did not reduce treatment failure or time to regain birthweight, but resulted in a significant reduction in duration of supportive care (MD -162.1 min/day, 95% CI -249.2, -75.1). Comparing phenobarbitone to diazepam, meta-analysis of two studies found phenobarbitone resulted in a significant reduction in treatment failure (typical RR 0.39, 95% CI 0.24, 0.62). Comparing phenobarbitone with chlorpromazine, one study reported no significant difference in treatment failure.</p> <p>In infants treated with an opiate, one study reported addition of clonidine resulted in no significant difference in treatment failure, seizures or mortality. In infants treated with an opiate, one study reported addition of phenobarbitone significantly reduced the proportion of time infants had a high abstinence severity score, duration of hospitalisation and maximal daily dose of opiate.</p> <p>Authors' conclusions</p> <p>Infants with NAS due to opiate withdrawal should receive initial treatment with an opiate. Where a sedative is used, phenobarbitone should be used in preference to diazepam. In infants treated with an opiate, the addition of phenobarbitone or clonidine may reduce withdrawal severity. Further studies are needed to determine the role of sedatives in infants with NAS due to opiate withdrawal and the safety and efficacy of adding phenobarbitone or clonidine in infants treated with an opiate for NAS.</p>		

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15-16 November, 2011	Introduction to writing a Cochrane review	Hamilton, New Zealand
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30 November - 1 December, 2011	Developing a protocol for a Cochrane review	Penang Malaysia
2 December, 2011	GRADE workshop	Penang Malaysia
1-2 December, 2011	Introduction to writing a Cochrane review	Sydney Australia

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Australasian Satellite of the Cochrane Neonatal Review Group

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