milk with long-chain polyunsaturated fatty acid (LCPUFA) is of benefit to preterm infants.

**Method:** All randomised trials evaluating the effects of LCPUFA supplemented formula in enterally-fed preterm infants were included.

**Results:** Seventeen trials involving 2260 preterm infants were included. The risk of bias varied across the included trials with ten studies having low risk of bias in majority of the domains. Most studies found no significant differences in visual acuity between supplemented and control infants. The form of data presentation and the varying assessment methods precluded the use of meta-analysis. Meta-analysis of four studies evaluating Bayley Scales of Infant Development at 12 months (N = 364) showed no significant effect of supplementation (Mental Development Index: MD 0.96; 95% CI −1.42 to 3.34; P = 0.43; I² = 71%); Psychomotor Development Index: MD 0.23; 95% CI −2.77 to 3.22; P = 0.88; I² = 81%). Three studies at 18 months (N = 494) revealed no significant effect of LCPUFA on neurodevelopment (Mental Development Index: MD 2.40; 95% CI −0.33 to 5.12; P = 0.08; I² = 0%); Psychomotor Development Index: MD 0.74; 95% CI −1.90 to 3.37; P = 0.58; I² = 54%). Meta-analysis of four studies at a corrected age of 12 months (N = 271) showed no significant effect of supplementation on growth outcomes (Weight: MD −0.33 to 0.24; 95% CI −0.53 to 0.23; P = 0.45; I² = 0%). A GRADE analyses for all outcomes.

**ONE DOSE PER DAY COMPARED TO MULTIPLE DOSES PER DAY OF GENTAMICIN FOR TREATMENT OF SUSPECTED OR PROVEN SEPSIS IN NEONATES: UPDATED COCHRANE REVIEW**

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**Background:** The objective of this study was to update the Cochrane Review comparing the efficacy and safety of one dose per day compared to multiple doses per day of gentamicin in suspected or proven sepsis in neonates.

**Methods:** All randomised or quasi-randomised controlled trials comparing one dose per day to multiple doses per day of gentamicin in neonates were included.

**Results:** Eleven randomised controlled trials were included (N = 574). Limited information suggested that infants in both ‘once a day’ as well as ‘multiple doses a day’ regimens showed adequate clearance of sepsis (typical RR 1.00, 95% CI 0.84 to 1.19; typical RR 0.00, 95% CI 0.70.19 to 0.19; 3 trials; N = 37). ‘Once a day’ gentamicin regimen was associated with fewer failures to attain peak level of at least 5 μg/mL (typical RR 0.22, 95% CI 0.11 to 0.47; 3 trials; 70.19 to 70.08; 9 trials; N = 422); and fewer failures to achieve trough levels of 2 μg/mL or less (typical RR 0.38, 95% CI 0.27 to 0.55; 3 trials; 70.22, 95% CI 70.29 to 70.15; 11 trials; N = 503). ‘Once a day’ gentamicin achieved higher peak levels (MD 2.58, 95% CI 2.26 to 2.89; 10 trials; N = 440) and lower trough levels (MD 70.57, 95% CI 0.69 to 70.44; 10 trials; N = 440) than ‘multiple doses a day’ regimen. There was no significant difference in ototoxicity between two groups (typical RR 1.69, 95% CI 0.18 to 16.25; N = 214). Nephrotoxicity was

**PRENATAL ALCOHOL EXPOSURE AND FACIAL SHAPE OF ONE-YEAR OLD CHILDREN: NO AMOUNT OF ALCOHOL IS WITHOUT CONSEQUENCE**

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**Background:** Children with Fetal Alcohol Spectrum Disorder (FASD) can have a characteristic facial appearance in addition to neurodevelopmental impairment. We do not know if there is a gradient of effects on the face of children with prenatal alcohol exposure (PAE).

**Method:** This is an analysis of 3D craniofacial images of 415 one year-old Caucasian children with detailed, prospectively collected PAE data. Analysis involved objective, holistic craniofacial phenotyping applying partial least-square regression to dense-surface models of the facial images.

**Results:** We saw a significant association between craniofacial shape and PAE, whether exposure occurred only in trimester one, or throughout pregnancy. Regions of difference (p < 0.05) were concentrated around the mid-face, nose, lips and eyes. Directional visualisation showed these corresponded to general recession of the midface and superior displacement of the nose, especially the tip of the nose, indicating shortening of the nose and upturning of the nose tip. Significant differences existed between groups with no exposure and groups with low exposure in trimester one (forehead), moderate/high exposure in trimester one (eyes, midface, chin, parietal region) and binge level exposure in trimester one (chin).

**Conclusion:** PAE, even at low levels, can influence craniofacial development. The observed differences were subtle, but are typical of dysmorphic features often seen in children with FASD. Although facial development is complex and each person’s face is unique, it is sensitive to some influences at critical stages of development. Our study shows that alcohol contributes to how the face is formed in the womb.

**THE RELATIONSHIP BETWEEN COMMON PATTERNS OF PRENATAL ALCOHOL EXPOSURE AND NEURODEVELOPMENT IN TWO-YEAR OLD CHILDREN**

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**Background:** Around 60% of women drink some alcohol while pregnant. There is conflicting evidence on the effect on