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[Intervention Review]

# Formula milk versus maternal breast milk for feeding preterm or low birth weight infants

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## ABSTRACT

### Background

Maternal breast milk may contain less nutrients than artificial formula milk but may confer important non-nutrient advantages for preterm or low birth weight infants.

### Objectives

To determine the effect of feeding with formula milk compared with maternal breast milk on rate of growth and developmental outcomes in preterm or low birth weight infants.

### Search methods

The standard search strategy of the Cochrane Neonatal Review Group was used. This included electronic searches of the Cochrane Central Register of Controlled Trials Register (CENTRAL, The Cochrane Library, Issue 3, 2007), MEDLINE (1966 - June 2007) and EMBASE (1980 - June 2007) and CINAHL (1982 to June 2007) (all accessed via OVID) and previous reviews including cross references.

### Selection criteria

Randomised controlled trials comparing feeding with formula milk versus preterm human milk in preterm or low birth weight infants.

### Data collection and analysis

The standard methods of the Cochrane Neonatal Review Group were used, with separate evaluation of trial quality and data extraction by two authors.

### Main results

No eligible trials were identified.

### **Authors' conclusions**

There are no data from randomised trials of formula milk versus maternal breast milk for feeding preterm or low birth weight infants. This may relate to a perceived difficulty of allocating an alternative feed to an infant whose mother wishes to feed with her own breast milk. Maternal breast milk remains the default choice of enteral nutrition because observational studies, and meta-analyses of trials comparing feeding with formula milk versus donor breast milk, suggest that feeding with breast milk has major non-nutrient advantages for preterm or low birth weight infants.

## **PLAIN LANGUAGE SUMMARY**

### **Formula milk versus maternal breast milk for feeding preterm or low birth weight infants**

Formula milk may contain more nutrients than maternal breast milk but it lacks the antibodies and other substances present in breast milk that protect and develop the immature gut of preterm or low birth weight infants. No trials that compared feeding with formula milk rather than their own mother's breast milk were identified. However, since another Cochrane review has found that feeding with formula compared to donor breast milk increases the risk of serious gut problems in preterm or low birth weight infants, it is unlikely that a such a trial would be acceptable to mothers and caregivers.