

Evidence Update

Maternal Health Series

Do pregnant women and their babies benefit from multiple micronutrient supplements?

There is no evidence that supplements of three or more micronutrients are of greater benefit than iron folic acid supplements in pregnancy.

Inclusion criteria

Studies:

Randomized controlled trials.

Participants:

Pregnant women who were HIV negative.

Intervention:

Intervention: multiple-micronutrient supplements with three or more micronutrients.

Control: placebo, no supplements, or supplements with one or two micronutrients.

Outcomes:

Primary: low birthweight, small-for-gestational age, pre-term births, perinatal death, premature rupture of membranes, pre-eclampsia, miscarriage, and maternal death.

Secondary: maternal outcomes including anaemia, and maternal wellbeing or satisfaction; adverse events; adverse effects of supplements; and cost of supplementation.

Results

- Nine trials (2 cluster randomized) including 15,378 women were included. Allocation concealment was adequate in eight trials. Eight trials were conducted in low- and middle-income countries.
- Women receiving multiple micronutrients had fewer low birthweight babies (relative risk 0.83, 95% confidence interval 0.76 to 0.91; 5110 participants, 5 trials) and small-for-gestational age babies (RR 0.92, 95% CI 0.86 to 0.99; 1352 participants, 2 trials). There were no significant differences between micronutrient and control groups for pre-term births or perinatal deaths.
- When compared to iron folate supplements, there were no differences in number of low birthweight babies (3576 participants, 4 trials), small-for-gestational age babies (2018 participants, 2 trials), preterm births (3669 participants, 4 trials) or perinatal deaths (6603 participants, 5 trials) in women taking multiple micronutrients.
- Multiple-micronutrient supplementation significantly decreased the likelihood of maternal anaemia (RR 0.61, 95% CI 0.52 to 0.71; 1350 women, 3 trials) compared with control groups, but there was no difference when compared with iron folic acid supplementation.
- The trials did not include data on other maternal outcomes, adverse events, adverse effects of supplements, or cost of supplementation.

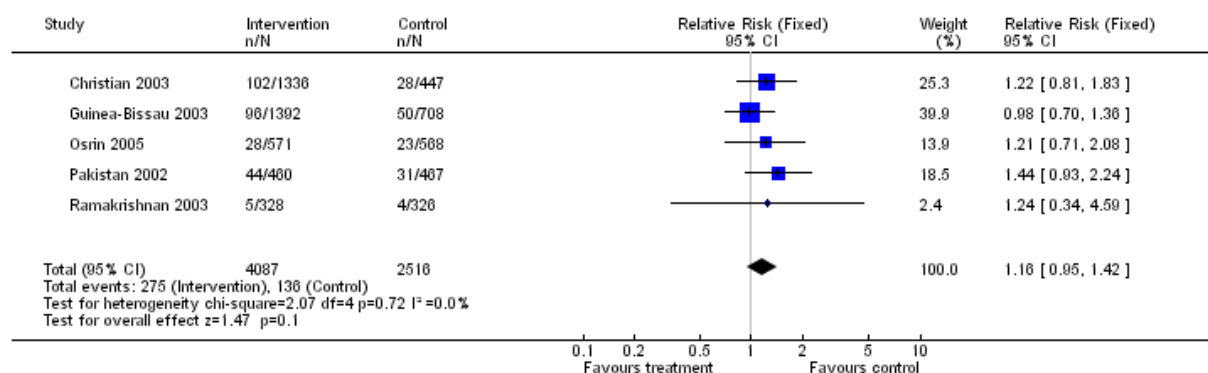


DFID Department for International Development

Adapted from Haider BA, Bhutta ZA. Multiple-micronutrient supplementation for women during pregnancy. *Cochrane Database of Systematic Reviews* 2006, Issue 4. Art. No.: CD004905. DOI: 10.1002/14651858.CD004905.pub2. *Evidence Update* published in July 2007.

Produced by: the Effective Health Care Alliance Programme (www.liv.ac.uk/evidence), Liverpool School of Tropical Medicine, supported by the Department for International Development UK; and the Australasian Cochrane Centre. *Evidence Update* can be distributed free of charge.

Multiple micronutrients versus iron folate supplements: perinatal deaths



Authors' conclusions

Implications for practice:

There is no evidence that multiple micronutrients are better than iron folate supplements for preventing pre-term births, low birthweight or small-for-gestational age babies, and perinatal death.

Implications for research:

Further research is needed to assess whether multiple micronutrient supplementation during pregnancy produces beneficial outcomes in pregnant women and their babies. Future trials should collect data on adverse events and long-term effects on women and their babies.