

Study: Vitamin A supplementation does not reduce maternal mortality

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A trial in Ghana has shown that vitamin A supplementation does not reduce maternal mortality—contradicting previous findings from a trial in Nepal which showed a 44% decrease. The new study (ObaapaVitA) is reported online and in an upcoming edition of *The Lancet* and has been written by Professor Betty R Kirkwood, Professor in Epidemiology & International Health and colleagues in the Department of Nutrition and Public Health Intervention Research at the London School of Hygiene and Tropical Medicine (LSHTM), UK.

ObaapaVitA was a cluster-randomised, double-blind, placebo-controlled trial undertaken in seven districts in Brong Ahafo Region in Ghana. The trial area was divided into 1086 small geographical clusters of compounds with fieldwork areas consisting of four clusters. All women of reproductive age (15–49 years) who gave informed consent and who planned to remain in the area for at least three months were recruited. Participants received either a [vitamin A](#) supplement or a placebo capsule orally once every week. Two clusters in each fieldwork area were randomly allocated to vitamin A supplementation and two to placebo. Capsules were distributed during home visits undertaken every four weeks, when data were gathered on pregnancies, births, and deaths. Primary outcomes were pregnancy-related mortality and all-cause female mortality. Cause of death was established by verbal post mortems.

A total of 544 clusters (104,484 women) were randomly assigned to vitamin A supplementation and 542 clusters (103,297 women) were

assigned to placebo. The main reason for participant drop out was migration out of the study area. In the final analysis, there was no statistically significant difference between the intervention and the control groups—there were 39 601 pregnancies and 138 pregnancy-related deaths in the vitamin A supplementation group (348 deaths per 100,000 pregnancies) compared with 39,234 pregnancies and 148 pregnancy-related deaths in the placebo group (377 per 100,000 pregnancies). 1,326 women died in 292,560 woman-years in the vitamin A supplementation group (453 deaths per 100,000 years) compared with 1,298 deaths in 289,310 woman-years in the placebo group (449 per 100,000 years).

Professor Kirkwood of LSHTM says, "Our results suggest that vitamin A supplementation once a week in women of reproductive age has no beneficial effect on their survival or on the survival of their babies in rural Ghana. The absence of an effect on stillbirth rate, neonatal survival or infant survival accords with the findings of trials undertaken in Nepal and Bangladesh. However, the absence of an effect of vitamin A supplementation on pregnancy-related mortality contrasts with the substantial reduction in mortality reported in the Nepal trial, the only other trial in which all women of reproductive age were given supplements."

Professor Kirkwood continues, "Further trials to assess the effect of vitamin A supplementation on [maternal mortality](#) are unlikely to be undertaken because of their size and cost. The body of evidence, although limited, does not support inclusion of low-dose vitamin A supplementation for [women](#) in either safe motherhood or child survival strategies." She concludes, "Research is as important to identify potentially good ideas that do not work, as it is in establishing those that do. This avoids governments wasting resources on ineffective interventions. The results of this trial in Ghana vindicate the decision not to change Safe Motherhood policy immediately after the Nepal trial."

Provided by London School of Hygiene & Tropical Medicine

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