

Abstract

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Vitamin A supplementation in infectious diseases: a meta-analysis.

Glasziou PP, Mackerras DE.

Department of Social and Preventive Medicine, Medical School, University of Queensland, Herston, Australia.

OBJECTIVE--To study the effect of vitamin A supplementation on morbidity and mortality from infectious disease.

DESIGN--A meta-analysis aimed at identifying and combining mortality and morbidity data from all randomised controlled trials of vitamin A.

RESULTS--Of 20 controlled trials identified, 12 trials were randomised trials and provided "intention to treat" data: six community trials in developing countries, three in children admitted to hospital with measles, and three in very low birth weight infants. Combined results for community studies suggest a reduction of 30% (95% confidence interval 21% to 38%; two tailed $p < 0.0000001$) in all cause mortality. Analysis of cause specific mortality showed a reduction in deaths from diarrhoeal disease (in community studies) by 39% (24% to 50%; two tailed $p < 0.00001$); from respiratory disease (in measles studies) by 70% (15% to 90%; two tailed $p = 0.02$); and from other causes of death (in community studies) by 34% (15% to 48%; two tailed $p = 0.001$). Reductions in morbidity were consistent with the findings for mortality, but fewer data were available.

CONCLUSIONS--Adequate supply of vitamin A, either through supplementation or adequate diet, has a major role in preventing morbidity and mortality in children in developing countries. In developed countries vitamin A may also have a role in those with life threatening infections such as measles and those who may have a relative deficiency, such as premature infants.

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