

Abstract

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Zinc and the risk for infectious disease.

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BACKGROUND: Zinc is an essential micronutrient for human growth, development, and immune function. Zinc deficiency impairs overall immune function and resistance to infection. Mild to moderate zinc deficiency can be best detected through a positive response to supplementation trials.

RESULTS: Zinc supplementation has been shown to have a positive effect on the incidence of diarrhea (18% reduction, 95% CI: 7-28%) and pneumonia (41% reduction, 95% CI: 17-59%), and might lead to a decrease in the incidence of malaria. Zinc has also proven to decrease the duration of diarrhea by 15% (95% CI: 5-24%).

CONCLUSION: Maternal zinc supplementation may lead to a decrease in infant infections. Studies assessing the role of zinc supplementation among persons with HIV, tuberculosis, and the common cold have not been conclusive. Two studies have shown zinc supplementation to decrease child mortality by more than 50%. Zinc clearly has an important role in infant and childhood infectious diseases; programs to increase the intake of zinc among deficient populations are needed.

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