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Zinc supplements reduce childhood mortality

A report published in the March 17, 2007 issue of *The Lancet* revealed the finding of researchers at the Johns Hopkins Bloomberg School of Public Health that supplementing with zinc lowered the risk of death in young children by 18 percent. The mineral is essential for immune and other functions.

Professor and chair of the Bloomberg School's Department of International Health Robert Black, MD and colleagues reported the findings of a randomized, double-blind trial conducted among 42,546 children in Pemba, Zanzibar, an area where malaria is prevalent. Half of the children were given a 10 milligram daily zinc supplement, and the remainder received a placebo.

While supplementing with zinc reduced overall deaths by 7 percent, children between the ages of 1 and 4 experienced an 18 percent reduction in mortality. Zinc did not appear to affect children younger than the age of 12 months. "This large trial demonstrates that the benefits of zinc supplementation include mortality reduction in addition to the reduction in cases of pneumonia, diarrhea and malaria that we found in previous trials," Dr Black concluded.

The study's finding that zinc supplements did not appear to benefit infants less than 12 months old could be due to the children having acquired sufficient amounts of the mineral in utero and from breastfeeding to meet their requirements during the first year of life. Additionally, it is significant that this group was only provided with half the dose of zinc that the older children in the study received.

"While further work is needed to evaluate higher dose effects, recommendations for use of zinc as a preventive strategy needs to consider the collective evidence of the effect on growth, morbidity and mortality, which would suggest benefit in children age 6 months and up," lead author Sunil Sazawal, PhD stated.

Health Concern

Immune system strengthening

Metallic micronutrients such as copper, zinc (Prasad AS 2000), and selenium influence the activity of antioxidant enzymes and can reduce oxidative stress. Among children, deficiencies of zinc, copper, and selenium have been linked to immune deficiency and infection (Cunningham-Rundles S et al 2005).

Selenium is involved in several key metabolic pathways (Rotruck JT et al 1973; McKenzie RC et al 1998; McKenzie RC 2000). Glutathione peroxidase, the enzyme that recycles glutathione, depends on the presence of selenium for its antioxidant activity (Arthur JR 2003). Plant food is a major dietary source of selenium—for example, garlic is rich in selenium—while the highest

concentration of dietary selenium occurs in meat.

Zinc deficiency is linked to impaired immune function, partly because of decreased T lymphocyte and B lymphocyte function. Zinc has shown the ability to decrease inflammation and the production of IL-2 (Tanaka S et al 2005). Copper and zinc together have been shown to stimulate internally produced antioxidants such as glutathione and superoxide dismutase (SOD) (Kuppusamy UR et al 2005).

http://www.lef.org/protocols/immune_connective_joint/immune_system_01.htm

Featured Products

OptiZinc®

Zinc is a mineral essential for formation of superoxide dismutase, one of the body's most important free radical scavengers and one that cannot be directly supplemented. Zinc also promotes wound healing, immune function, taste sensitivity, protein synthesis, insulin production, and reproduction including organ development and sperm motility.

<http://www.lef.org/newshop/items/item00915.html>



Children's Formula Life Extension Mix™

The effect of more than the recommended daily amount (RDA), depending on age, of vitamins and nutrients for children are largely unknown. Children's Formula Life Extension Mix contains ingredients from Life Extension Mix in amounts that are suitable for children 2 years and older.

<http://www.lef.org/newshop/items/item00124.html>



Life Extension

Life Extension Clinical Research

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<http://www.lef.org/ClinicalResearch/>

If you have questions or comments concerning this issue or past issues of Life Extension Update, send them to ddye@lifeextension.com or call 954 202 7716.

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