

Zinc Helps Infants Respond To Bacterial Infection Treatment, Study

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AsianScientist (Jun. 4, 2012) - In a newly released [clinical study conducted in India](#), hundreds of seriously ill infants who received zinc - an essential micronutrient for the immune system and human growth - as well as antibiotics, responded better and more quickly to treatment than those who did not. This finding is the first proof that zinc supplements may boost infant survival from infections.

"It does not need to be serious zinc deficiency. Even mild deficiency can compromise a child's immunity," the study's lead investigator, Shinjini Bhatnagar, of the Translational Health Science and Technology Institute and All India Institute of Medical Sciences, told IRIN.

The infants' weak immune systems, among other reasons, can lead to first-line treatments not working.

More than 300 infants no older than 120 days (four months), hospitalized in New Delhi, the capital, for suspected meningitis (an infection of the brain or spinal cord lining), pneumonia (a lung infection) or sepsis (blood poisoning), were given zinc in addition to antibiotics.

They were found to be 40 percent less likely to experience "treatment failure" - needing a second antibiotic within one week of the first treatment, or intensive care or death within 21 days - than those given a placebo.

Multiple medical studies have identified widespread zinc deficiency in low- and middle-income countries, and how this increases the risk of infection, but the research has thus far focused on children at least six months old.

In 2010, infections like pneumonia and meningitis accounted for 47 percent of all deaths in children aged under five worldwide, and almost a quarter died during the first 28 days of life, according to [recent research](#) by the Child Health Epidemiology Group, a global advisory body on interventions.

Rolling out zinc

The World Health Organization (WHO) recommended zinc and oral rehydration salts (ORS) to treat diarrhea, a symptom of infections and a leading child killer, in 2004. Many low and middle-income countries have since changed their diarrhea treatment policies to include zinc, according to a map by the U.S.-based [Zinc Task Force](#).

Yet only a "very small proportion" of children who need zinc have access to it, according to a [2009 WHO bulletin](#).

Policy changes are just one part of rolling out zinc supplements, Kenneth Brown, a professor of nutrition and child health at the University of California-Davis, told IRIN.

"The distribution system - from central stores to peripheral facilities - must be functioning efficiently, and clinicians must be trained in when and how to use the [zinc] supplements if the programs are actually going to be effective."

Ideally, a child's immunity should be bolstered with zinc supplements (available in syrup and tablets) to help prevent infections, he added.

"However, therapeutic intervention programs have the advantage of being less costly, and allowing targeting of those infants/children at greatest short-term risk of mortality."

Bhatnagar has applied to expand the study to include more children in different parts of India as well as elsewhere in South Asia.

The article can be found at: [Bhatnagar S et al. \(2012\) Zinc as adjunct treatment in infants aged between 7 and 120 days with probable serious bacterial infection: a randomised, double-blind, placebo-controlled trial.](#)

Source: [IRIN](#); Photo: Micronutrient Initiative.

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