ZINC SUPPLEMENTATION BOOSTS IMMUNE SYSTEM IN CHILDREN, COCHRANE REVIEW FINDS

Zinc supplements reduce diarrhoea and other infections in malnourished children, and may prevent death, according to a new study published in The Cochrane Library. The study is the first Cochrane systematic review to focus on zinc as a means to prevent childhood death, including deaths caused by diarrhoea, one of the biggest killers of under-fives.

Zinc is a micronutrient with important roles in growth and in the immune, nervous and reproductive systems. The human body cannot make it, so it has to come from our diet. It is estimated that more than 1 in 6 people globally are deficient in zinc and that around 1 in every 58 deaths in children under five is related to zinc deficiency. Zinc deficiency is common in Southeast Asia, sub-Saharan Africa and parts of Latin America.

The authors were interested in whether zinc supplements could reduce childhood death and disease, and help support growth. They reviewed data from 80 trials involving 205,401 children aged six months to twelve years, mostly in low and middle income countries. Overall, they concluded that zinc supplementation could benefit children as part of wider programmes to address public health and nutrition challenges in these countries.

“We should remember that supplements are not a substitute for a well-balanced diet,” said senior researcher Professor Zulqar Bhutta from the Center of Excellence in Women and Child Health, Aga Khan University, Karachi, Pakistan, and Sick Kids Center for Global Child Health, Toronto, Canada. “However, in countries where zinc deficiency is common, supplements may help to reduce child deaths and related diseases in the short-term.”

Those children who took zinc were less likely to suffer a bout of diarrhoea, and when the researchers looked at growth differences, they saw that children who were given zinc were slightly taller by the end of the trials compared to those who did not. However, healthy eating is more important for growth. “Eating foods with balanced energy and protein and multiple micronutrients would probably have a larger effect for many malnourished children,” said Evan Mayo-Wilson, the lead author based at the Johns Hopkins University Bloomberg School of Public Health in Baltimore, Maryland.

Although zinc supplements were associated with an increase in vomiting, the researchers think that overall the benefits of giving zinc outweigh the harms.

Dr David Tovey, Editor-in-Chief, Cochrane, said, “Policymakers in low and middle income countries need evidence that directly addresses the needs of their own health services. This comprehensive review makes a very valuable contribution to the evidence base around interventions may make an important contribution to improving Global Health.”


Copyright © 2014 The Cochrane Collaboration. Published by John Wiley & Sons, Ltd., reproduced with permission.