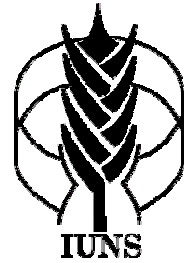




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Estimated One in Five People Worldwide Lack Enough Zinc in Diet

***Harm Underestimated in Past; Linked to Child Dwarfism, Diarrhea, Pneumonia
Mortality Rates Drop 50% Among Zinc-Supplemented High-Risk Children***

Drs. Ken Brown, Juan Rivera and Cutberto Garza are available for advance phone interviews Fri. Mar. 19 and Mon. Mar. 22. Please call 416-538-8712 to schedule a time. The report, to be presented March 23 at UN Headquarters in New York (Standing Committee on Nutrition), is online at: <http://www.izincg.ucdavis.edu/publications/FNBv25n1supp2zinc.pdf>

Up to one-fifth of the world's people lack sufficient zinc in their diet, while an estimated one-third live in countries considered at high risk of zinc deficiency, warns a comprehensive new report by an international group of medical researchers.

The report, by the International Zinc Nutrition Consultative Group (IZiNCG), in collaboration with the United Nations University and the International Union of Nutrition Sciences, cites poverty and the relatively high price of zinc-rich foods such as red meat and shellfish, legumes and whole grain cereals as contributors to a deficiency problem much more common and harmful to health in developing countries than previously believed.

Countries at high-risk are mostly in South and Southeast Asia, sub-Saharan Africa, Central America and the Andean area of South America. However, more research is needed to better measure the size of the problem and identify specific sub-groups at highest risk, the report says.

The report¹, being presented at the UN Standing Committee on Nutrition March 23, says the magnitude and associated problems of zinc deficiency have been poorly understood in the past. It sheds new light on the importance of zinc to human health

¹ "Assessment of the Risk of Zinc Deficiency in Populations and Options for its Control."

and points a way forward not only for addressing deficiency problems in developing countries but also for future research.

The consultative group IZiNCG, established in 2000 by the UN University Food and Nutrition Programme (based at Cornell University, New York) and the International Union of Nutrition Scientists (based at UCLA, California), describes major new insights on 1) the human health consequences of zinc deficiency, 2) available methods for assessing population zinc status and current estimates of the magnitude and global distribution of the problem, and 3) possible strategies to control this nutritional deficiency disease.

“Knowledge of the occurrence of zinc deficiency and its importance to human health has increased greatly in recent years,” says Dr. Ken Brown, MD, a professor of international nutrition at the University of California, Davis, who co-chairs the group’s Steering Committee.

Dr. Brown says a considerable number of community-based, controlled intervention trials have been conducted in lower income countries in the past decade, in which zinc supplements were provided to young children.

“These studies consistently show that the incidence of diarrhea and respiratory infections is reduced by providing additional zinc, and growth rates of previously stunted children are increased significantly,” he said. “There is also some evidence that infants of mothers who received zinc supplements during pregnancy have less diarrhea during the first months of post-natal life.

“Interventions to improve zinc status show promise as a relatively low-cost means of improving children's health, and possibly their chances of survival, in poor countries.”

The publication provides a comprehensive evaluation of information on zinc metabolism, zinc requirements, risk factors for zinc deficiency, methods of assessing population zinc status, and available options for developing intervention programs to control zinc deficiency.

The research team recommends updating the advice provided to health authorities responsible for assessing a population’s risk of zinc deficiency.

Zinc deficiency is an important cause of the higher morbidity and mortality rates among impoverished children, contributing to impaired growth and development, the research shows. Randomized, controlled trials of zinc supplementation among such children produce impressive 25% decreases in the prevalence of diarrhea and 40% reductions in the rate of acute lower respiratory infections, like pneumonia.

These diseases are among the most common causes of child mortality in developing countries. Early evidence indicates that mortality rates are reduced by 50% or more among zinc-supplemented children in high risk settings. The report cites research that

demonstrates chronically undernourished children who receive supplemental zinc have significantly increased rates of linear growth and weight gain.

The report describes methods to evaluate the adequacy of dietary zinc intakes, and to assess zinc status bio-chemically using the concentration of zinc in serum. These methods may be included in nutrition and health surveys. Standard methods for the interpretation of survey results are suggested to facilitate decision-making by public health programmers.

The research cites several options for combating zinc deficiency, including:

- * Pharmacological supplements such as tablets or syrups, or as specially formulated zinc-fortified foods;
- * National programs to fortify staple foods (e.g., flour), a strategy already employed to deliver other nutrients such as iron and folic acid;
- * Public education on good dietary sources of zinc, such as animal source foods (meat, sea food) and whole grain cereals and legumes, and increasing their availability in the food supply.

“National programs to improve zinc status are only just being initiated, so practical experience with zinc programs is still limited,” says Dr. Juan Rivera of Mexico, co-chair of the Steering Committee. “This study contains abundant evidence that the rapid implementation of such programmes would pay immediate dividends in improving the health and life expectancy of people in high-risk countries, particularly children.”

Says Dr. Cutberto Garza, MD, a Professor at Cornell University and Director of the UN University’s Food and Nutrition Programme: “It is hoped this document will serve to promote greater awareness among key public health decision makers of the importance of zinc nutrition and help governments, international agencies, and private organizations to ameliorate or, ideally, prevent health problems related to inadequate zinc intake.”

The report will be circulated to nutrition and health program officers in developing countries by IZiNCG co-funders: the Micronutrient Initiative (Ottawa, Canada) and UNICEF (New York, USA). It will also be available on the IZiNCG website (www.izincg.ucdavis.edu).

IZiNCG

Administrative support for IZiNCG is provided by the UN University Food and Nutrition Program, the International Union of Nutrition Scientists, and the International Nutrition Foundation, and receives funding from The Micronutrient Initiative, UNICEF, The UN University Food and Nutrition Programme, and the International Zinc Association. Further support for IZiNCG events is provided by the US Agency for International Development.

The group's activities are coordinated by an eight-member Steering Committee:

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