

# Zinc & Health

An update on the  
Zinc-Health activities of the  
International Zinc Association

## Zinc is an essential trace element for humans, animals and plants.

**Z**inc is an essential nutrient for human health. Ensuring adequate levels of zinc intake should be a key component in efforts to reduce child illness, enhance physical growth and decrease mortality in developing countries. In spite of the proven benefits of adequate zinc nutrition, zinc deficiency is the fifth leading risk factor for disease in developing countries with high mortality rates (WHO, 2002).

**T**here is no life without zinc. Zinc is found in all parts of our body; it is in our organs, tissues, bones, fluids

and cells. Because zinc is used to generate cells, it is especially important during pregnancy, for the growing fetus whose cells are rapidly dividing. And zinc is vital in activating growth (height, weight and bone development) in infants, children and teenagers.

**A**mong all the vitamins and minerals, zinc shows the strongest effect on our all-important immune system.

**Z**inc has proven effective in helping fight infections and can even reduce the duration and severity of the common cold.



## Zinc is Solution to World's Biggest Problem, Say Nobel Laureates

Brussels, Belgium (June 12, 2008)

-- Zinc and vitamin A can be provided to malnourished children at relatively low cost, effectively treating the number-one problem facing the world, according to expert economists, including five Nobel Laureates.

The panel of eight economists convened as Copenhagen Consensus 2008, a project of the Copenhagen Consensus Centre of the Copenhagen Business School ("Consensus"), to consider world problems and evaluate cost-effective solutions thereto. The panel then ranked problems that could be reasonably addressed. Dr. Bjorn Lomborg, founder of the Consensus and former Director of the Danish Environmental Assessment Institute, said of the Consensus process:

"This gives us the ultimate overview of how global decisions can best be made and how we can best spend money to do good in the world. Prioritising is hard. It's much easier to say we want to do everything, but unfortunately we have limited resources. We don't just focus on what's fashionable, but also on what's rational."

The panel concluded that zinc and vitamin A could be provided to 80% of the estimated 140 million undernourished children (primarily in sub-Saharan Africa and Southeast Asia) for \$60 million annually, with resulting benefits (in terms of better health, increased future earnings and fewer deaths) of over \$1 billion - a return of \$17 for each dollar spent. By contrast,

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for example, the expert economists ranked reducing greenhouse gases to control global warming thirtieth, finding that spending \$800 billion in the future would only yield \$685 billion in benefits, a negative rate of return.

Research has shown that zinc deficiency is a critical health problem in developing countries. Earlier this year, *The Lancet*, a leading medical journal, identified zinc deficiency as responsible for 4% of worldwide deaths and disability-adjusted life years in children under the age of five years in lower-income countries, and the World Health Organization has similarly recognized the problem of zinc deficiency in children. Despite this widespread recognition of the problem in the scientific community, not enough is being done, as the Consensus found.

## How can we begin to eliminate zinc deficiency?

Affordable approaches to eliminate zinc deficiency exist, and these need to be implemented and evaluated.

To plan effective interventions to control zinc deficiency, there is an urgent need to have better information on the zinc status of populations.

Efforts should be made to implement zinc supplementation for diarrhea treatment and for treatment of severe malnutrition, as recommended by the WHO.

Zinc can be added to the mineral premixes used in fortification programs in countries with a high or moderate risk of zinc deficiency.

Preventive zinc supplementation should be considered for children less than 5 years of age in high risk countries.

Another longer term intervention strategy to improve zinc nutrition is dietary diversification/modification, including agricultural and food processing technologies to increase the amount of absorbable zinc in staple foods.

To learn more about means of addressing zinc deficiency please visit the International Zinc Nutrition Consultative Group's website at: <http://www.izincg.org>



**In spite of the proven benefits  
of adequate zinc nutrition,  
approximately 2 billion people still  
remain at risk of zinc deficiency**

## Zinc Industry Backs Efforts to Address Zinc Deficiency

The International Zinc Association ("IZA"), on behalf of the zinc industry, has taken the global lead in advocating for programs such as those recommended by the Copenhagen Consensus. IZA was instrumental in the establishment of the International Zinc Nutrition Consultative Group ("IZiNCG"), and continues to financially support this group of scientists affiliated with the International Union of Nutritional Sciences. IZA and IZiNCG are dedicated to promoting and assisting efforts to reduce zinc deficiency worldwide through advocacy, education and technical assistance. IZA has sponsored technical conferences, produced brochures and has established several websites ([www.zinc-health.org](http://www.zinc-health.org) and [www.zinc-crops.org](http://www.zinc-crops.org)). In addition, IZA has been coordinating with the International Fertilizer Association and others to provide more zinc in crops by using zinc-containing fer-

tilizers on zinc-deficient soils -- prevalent globally, especially in the developing world.

Stephen Wilkinson, IZA Executive Director, explains:

"The zinc industry has been working diligently to inform policymakers that while zinc deficiency, particularly in children, is a major health threat; it is one that can be readily addressed with existing tools such as the use of zinc-

containing fertilizers, fortification of food or supplementation with zinc. We are delighted the Copenhagen Consensus has identified zinc deficiency as its top priority global issue that can be handled in a cost-effective manner."

IZA is currently evaluating how best to address the Copenhagen Consensus recommendations on a global basis, along with exploring partnership opportunities in zinc supplementation projects.

**The International Zinc Association,  
on behalf of the zinc industry, is  
taking a global lead in advocating  
for programs aimed at addressing  
zinc deficiency.**

**visit us on the web at: [www.zinc-health.org](http://www.zinc-health.org)  
and, [www.zinc-crops.org](http://www.zinc-crops.org)**