

Effects of Micronutrient Interventions during Pregnancy on Health, Development and Survival Later in Life: Findings from Randomized Controlled Field Trials

Rationale:

Micronutrient deficiencies are widespread and exact tolls on health and survival of mothers, infants and young children. While most attention has correctly focused on elucidating effects of micronutrient interventions on short-term health outcomes among mothers, infants and children there has been little work to date to reveal latent, causal effects of developmental micronutrient exposures on health, cognition, development and survival later in life. The reason has been a lack of population cohorts that have been intervened with micronutrient supplements early in life and adequately followed years later for multiple outcomes. Over the past two decades several large micronutrient intervention trials have been conducted among mothers and children in undernourished settings of the developing world. Participant cohorts of these early life trials have begun to be followed for health, development and survival outcomes from childhood through adulthood. This mini-symposium will be, to our knowledge, the first to look beyond infancy and early childhood to explore causal influences of micronutrient exposures in pregnancy, infancy and early childhood on metabolic disorders, function, cognition, growth, disability and survival in the school-aged, adolescent and adult cohorts in chronically undernourished populations.

Session Chair & Co-Chair:

Keith P. West, Jr., USA and Faruk Ahmed, Kuwait

Session Topics & Speakers:

Topic 1: *Maternal Micronutrient Nutrition and Health of the Next Generation: Possible Effects, Plausible Pathways*

Speaker: Andrew Prentice, UK (20 min)

Topic 2: Following Cohorts from Randomized Trials to Detect Long-term Health Effects of Nutrition Interventions in Nepal: Design Considerations

Speaker: Keith P. West, Jr., USA (15 min)

Topic 1: Effects of Maternal Vitamin A or β -Carotene Supplementation on Lung Health of Offspring at 9 to 13 Years of Age.

Speaker: William Checkley, USA (15 min)

Topic 1: Maternal Vitamin A Supplementation: Effects on Peri-adolescent Cognition.

Speaker: Laura Murray-Kolb, USA (15 min)

Topic 1: Antenatal Micronutrient Supplementation: Effects on Cognition in Children 6 to 8 Years of Age.

Speaker: Parul Christian, USA (15 min)

Topic 1: Antenatal Micronutrient Supplementation: Effects on Indices of the Metabolic Syndrome at 6 to 8 Years of Age.

Speaker: Christine P. Stewart, USA (15 min)

Topic 1: Supplemental Nutrition in Pregnancy and Early Childhood: Effects on Cardiovascular Risk in Later Life in India

Speaker: R Kramadhari, India (15 min)

Discussion (10 min)