

## The long term significance of nutrition in early childhood

### **Session Description**

Prenatal and early childhood nutritional insufficiency, followed by later exposure to nutritional excesses resulting in high rates of weight gain enhances risk of many chronic diseases. Developing and transitional countries pose just this set of conditions: adults who are now experiencing more sedentary lifestyles and higher dietary energy intakes were born when rates of poor maternal nutrition, low birth weight, and infant growth faltering were high. Moreover, pediatric health care includes promotion of compensatory weight gain in children with prior growth restriction. This may have beneficial effects on linear growth and cognitive development, but adverse effects if excess weight gain leads to obesity and chronic disease risk. The proposed symposium would provide perspectives on how prenatal and early child nutrition affects later health and human capital outcomes.

The symposium will include invited presentations (20 minutes each followed by 5 minutes of questions) from four senior researchers working on birth cohorts in a variety of settings. The first 2 presentations will highlight collaborative work being done by the Consortium of Health Orientated Research in Transitional Societies (COHORTS), a research group formed to study the long term effects of maternal and child nutrition in early life using data from birth cohorts in 5 transitional countries (Brazil, Guatemala, India, The Philippines and South Africa). The third presentation would highlight the Pune (India) study, one of the first cohort studies specifically designed to study the long term consequences of early child nutrition. The fourth presentation will focus on a well characterized cohort in the UK (ALSPAC).

In addition, the proposed symposium would include 3 presentations ( 10 minutes each plus 3 minutes of questions) selected from contributed abstracts.

### **Purpose**

Studies in developing and transitional countries (Brazil, Guatemala, India, the Philippines and South Africa) will be contrasted with a large birth cohort study in the UK, to provide insights into whether early child nutrition relates differently to later health depending on environmental context. A key emphasis would be understanding the balance of potentially beneficial and adverse effects of rapid childhood growth

### **Session Chair & Co-chair:**

**Chair:** Linda Adair, Professor, Department of Nutrition, Gillings School of Global Public Health, University of North Carolina at Chapel Hill, USA

**Co-chair:** Reynaldo Martorell, Robert W. Woodruff Professor of International Nutrition & Chair, Hubert Department of Global Health, Rollins School of Public Health of Emory University, USA

### **Session Topics and Speakers:**

**Topic 1:** *Birth weight, early child growth and young adult body composition, blood pressure and glucose metabolism: A pooled analysis from birth cohorts in five developing and transitional countries*

**Speaker:** Dr. Linda Adair, Professor, Department of Nutrition, Gillings School of Global Public Health, University of North Carolina at Chapel Hill, USA

**Topic 2:** *Birth weight, early child growth and young adult height and school attainment: A pooled analysis from birth cohorts in five developing and transitional countries*

**Speaker:** Dr. Reynaldo Martorell, Robert W. Woodruff Professor of International Nutrition & Chair, Hubert Department of Global Health, Rollins School of Public Health of Emory University, USA

**Topic 3:** *New findings on the long term effects of maternal nutrition during pregnancy: The Pune Study*

**Speaker:** Dr. Ranjan Yajnik, Prof CS Yajnik MD FRCP, Director, Diabetes Unit, King Edward Memorial Hospital, Rasta Peth, Pune, India

**Topic 4:** *The ALSPAC study: contrasts and similarities with cohorts in developing and transitional countries*

**Speaker and Discussant:** George Davey Smith, Professor of Clinical Epidemiology, Head of Epidemiology Division, University of Bristol, UK (TBC)

### **Short Sessions**