Informing international policy on maternal nutrition

The end users of our research

Our researchers have generated data that has been critical in demonstrating the biological plausibility of associations between diet in pregnancy and later disease. This has influenced expert panels and non-governmental organisations in framing recommendations for nutrition in pregnancy and infancy.

Our research

Two decades of epidemiological and experimental research has shown that risk of disease in adulthood is partly determined by maternal diet during pregnancy and nutrition during early infancy. This is described as nutritional programming. Our investigators initiated and subsequently developed the experimental research that confirmed the biological plausibility of programming and offered insight into a mechanistic pathway. Researchers now at Nottingham, developed the first nutrition-related animal model of early life programming in which nutrient-restricted pregnant rats gave birth to smaller offspring that developed high blood pressure and an increased propensity to metabolic disorders. This and related work identified a plausible epigenetic mechanism operating during embryonic and fetal life that may underpin these effects.

The benefits of our research

University of Nottingham researchers are among a number of prominent UK groups that take a lead role in studying the early life programming phenomenon and shaping the positions and policies of public health bodies. Our research has contributed evidence to influence key reports from the Scientific Advisory Committee on Nutrition, and the British Medical Association. These have fed into UK strategies for health promotion including the Department of Health's Change4Life campaign. The most recent outcome of research in this area was the 2012 World Health Organisation publication of global targets and recommendations for the nutrition of mothers, infants and young children in order to reduce the prevalence of low birth weight.

External links

Scientific Advisory Committee for Nutrition report; Harnessing the Power of epigenetics for targeted Nutrition; Change4Life