

Beyond Barker: Advantageous Early-Life environments Cushion the Genetic Risk for Ischaemic Heart Disease

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Abstract:

In one of the first papers on the impact of early-life conditions on individuals' health in older age, Barker and Osmond (1986) show a strong positive relationship between infant mortality rates in the 1920s and ischaemic heart disease in the 1970s. We merge historical data on infant mortality rates to 370,000 individual records in the UK Biobank using information on local area and year of birth. We replicate the association between the early-life infant mortality rate and later-life ischaemic heart disease in our sample. We then go 'beyond Barker', by showing considerable genetic heterogeneity in this association that is robust to within-area as well as within-family analyses. Our findings show that, in areas with the lowest infant mortality rates, the effect of the polygenic index for heart disease effectively vanishes. These findings suggests that advantageous environments can cushion one's genetic disease risk.

An older version of the paper can be found [here](#) (note we are currently revising it)