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## **Instrumental Variable Estimation of the Causal Effect of Hunger Early in Life on Health Later in Life**

by Gerard J. van den Berg, Pia Pinger, Johannes Schoch  
(November 2011)

### **Abstract:**

Numerous studies have evaluated the effect of nutrition early in life on health much later in life by comparing individuals born during a famine to others. Nutritional intake is typically unobserved and endogenous, whereas famines arguably provide exogenous variation in the provision of nutrition. However, living through a famine early in life does not necessarily imply a lack of nutrition during that age interval, and vice versa, and in this sense the observed difference at most provides a qualitative assessment of the average causal effect of a nutritional shortage, which is the parameter of interest. In this paper we estimate this average causal effect on health outcomes later in life, by applying instrumental variable estimation, using data with self-reported periods of hunger earlier in life, with famines as instruments. The data contain samples from European countries and include birth cohorts exposed to various famines in the 20th century. We use two-sample IV estimation to deal with imperfect recollection of conditions at very early stages of life. The estimated average causal effects often exceed famine effects by a factor three.

**Text:** See [Discussion Paper No. 6110](#)

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