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Low birthweight linked to higher death rates from infancy through adolescence

PLOS

Low birthweight is associated with increased death rates from infancy through adolescence, according to a population study of live births in England and Wales published this week in *PLOS Medicine*. The study, conducted by Sailesh Kotecha and colleagues of Cardiff University, Cardiff, United Kingdom, suggests that focusing on upstream events to prevent low birthweight remains an important health goal.

Death rates are increased in babies born with low birthweight (<2,500 g; LBW) compared to those born with appropriate birth weight. As survival among babies with low birthweight continues to improve, it is important to investigate longer-term survival among these children, especially for those born with very low birthweight (<1,500 g; VLBW).

Using the largest and most recent dataset available, Kotecha and colleagues investigated death rates among over 12 million children born from 1993 through 2011 in England or Wales. Adjusted hazard ratios for infant deaths were 145 (95% confidence intervals: 141, 149) and 9.8 (9.5, 10.1) for VLBW and LBW groups respectively when compared to the ?3500g group. The respective hazard ratios for death occurring at age 1-18 years were 6.6 (6.1, 7.1) and 2.9 (2.8, 3.1). Perinatal events and congenital malformations were the common causes of death in infancy. Among children aged 1-18 y, conditions of the nervous system and respiratory system were leading causes of death in the VLBW group while cancers and external conditions (including accidents) were primary causes of death in the ?2,500 g groups.

The study is observational and findings may be affected by confounding; notably, data on gestational age and maternal smoking were not available. However, the dataset is population-wide, recent, and includes follow-up to 18 years with cause of death data. The authors state, "By understanding and ameliorating the influences of upstream exposures such maternal smoking and deprivation, later mortality can be decreased by reducing the delivery of vulnerable infants with LBW."

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