



Size at birth and neonatal and postneonatal mortality.

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Abstract: Birthweight is a crude indicator of size at birth. Some neonatologists and obstetricians have advocated the use of ponderal index and birthlength to characterize size at birth. This paper examines the associations between various size-at-birth indicators and neonatal and postneonatal mortality, with an emphasis on ponderal index and birthlength. Size at birth, gestational age and mortality data for about one million babies born alive in Sweden between 1987 and 1995 were collected from the Swedish Medical Birth Registry. A multinomial logit regression was used to estimate conditional odds ratios. Birthlength and ponderal index were independently associated with neonatal and postneonatal mortality. In the latter period, ponderal index was only weakly associated with mortality. The associations were not sensitive to exclusion of cases of congenital anomalies and adjustment for gestational age. Conclusion: Birthlength is strongly associated with both neonatal and postneonatal mortality; ponderal index is strongly associated with neonatal, but weakly with postneonatal mortality. The findings are consistent with previous hypotheses about a transient effect of ponderal index and a persistent effect of birthlength.

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