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50 Years Ago in *THE JOURNAL OF PEDIATRICS*

Catch-Up Growth in Low Birth Weight Infants: Boon or Bane?

Babson SG. Catch-up growth in low birth weight infants. *J Pediatr* 1970;77:11-8.

At the time of publication of this study, newborn size at birth and classification into fetal growth percentiles had been well described.¹ Babson portrayed postnatal growth of a group of 36 preterm or small for gestational age low birth weight (LBW) neonates and compared it with the published data on growth of “full-sized” neonates up to 1 year corrected age. No software was available to smoothen the growth curves, and few datapoints at different postnatal ages were manually extrapolated to demonstrate growth. Although the weight and length of these LBW survivors lagged in comparison with infants of normal birth weight, the most affected were those born at term gestation with fetal growth restriction (FGR). In contrast, good catch-up growth in head circumference was observed in all LBW neonates.

Fifty years later, we have postnatal growth charts derived from larger cohorts of normal-weight or LBW infants followed longitudinally from the fetal period to childhood. Villar et al have shown that with current evidence-based feeding practices, healthy preterm neonates can catch up to match the growth of term babies by 64 weeks postmenstrual age.² We now know that neonates with FGR constitute a heterogenous population. Whereas neonates with low weight but relatively preserved head circumference and length at birth (asymmetrical growth restriction) show good catch-up growth, those with symmetrical fetal growth retardation are at greatest disadvantage. Rapid catch-up to match normal-weight term infants has a short-term survival advantage, especially in resource-limited settings. However, this may place infants with FGR at higher risk of adult-onset metabolic disorders, and the best nutritional strategy in these infants remains an enigma. Large, well-designed randomized controlled trials are needed to identify the benefits and harms of nutrient fortification and age at introduction of complementary feeding in infants with FGR.

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