

Growth Status and Growth Rates of a Varied Sample of Low Birth Weight, Preterm Infants: A Longitudinal Cohort From Birth to Three Years of Age

The Infant Health and Development Program, a collaborative effort by 8 US medical schools, is the basis for this longitudinal study of the growth characteristics of low-birth-weight (LBW), preterm infants. In it, 985 LBW infants were grouped as follows:

Group	No.	Weight
1	149	<1,250 g
2	474	1,251-2,000 g
3	362	2,001-2,500 g

All infants were assessed at 40 weeks postconceptional age and at 4, 8, 12, 18, 24, 30, and 36 months, gestation-corrected age. Growth rates were estimated for 0 to 12, 12 to 24, and 24 to 36 months of age. Each measurement was available for at least 956 children.

Boys in each group differed significantly at all ages for length, weight, and head circumference. Girls differed significantly in head circumference at all visits, in weight until 24 months, and in length until 12 months. In summary, there was evidence of compensatory growth in length for both sexes in the first year of life but none thereafter. However, this is far from complete by age 36 months, gestation-corrected age. The data demonstrate that LBW preterm infants have different patterns of growth during the first years of life, as compared with term infants. Their growth should be monitored on grids developed from similar infants.

Casey P, Kraemer H, Bernbaum J, et al. *J Pediatr* 1991;119:599-605.

Editor's comment: *These data are the best yet available to compare the growth characteristics of LBW preterm infants with those of term infants. The data do differ from those of other investigators in that others have reported more "catch-up" growth than that reported here. However, as the authors point out, most other studies have been too small and/or have failed to maintain the cohort for long enough intervals to describe adequately the long-term status and patterns of growth in LBW infants. The authors, in total fairness, caution that these data include some on infants who were both preterm, which was a criterion for admission to the study, and LBW for gestational age. The authors plan to use these descriptive growth data to develop comparison standards for monitoring the growth of all LBW preterm infants independent of such clinical characteristics as size (appropriate-for-gestational age versus small-for-gestational age), presence of chronic neurologic disease, and the like. Current National Center for Health Statistics growth charts are not categorized by any such clinical characteristics. The authors are commended for diligently pursuing this complex problem and are encouraged to continue. Further data are very much needed, for example, to chronicle the differences in growth characteristics at all ages until adulthood is attained.*

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