

**Research Digest:  
Early Childhood Development**

**Kelly-Vance, L., Needelman, H., & Anthis, K. A. (2004).** Assisted reproduction versus spontaneous conception: A comparison of the developmental outcomes in twins. *The Journal of Genetic Psychology, 165*(2), 157-167.

Assisted reproduction such as in vitro fertilization (IVF) and other methods of artificial reproduction have gained significant attention regarding children's social and physical development when compared to naturally conceived offspring. Low-birth weight and shorter gestational age tend to be serious risk factors for children's development. Therefore, the researchers compared the risk factors associated with twins conceived by spontaneous and reproductive conception and aimed to understand the long-term effects of type of conception. Depending on the factors at birth, children may be at risk for slow development in later years. The researchers evaluated a portion of the two groups' weight, mental development, and physical development at a follow-up at 24 months of age.

Sixty mothers representing 120 children (39 mothers conceived naturally, 18 used assisted reproductive technology) were randomly selected. Clinicians administered the Mental and Motor Scales from the Bayley Scales of Infant Development- Second Edition (BSDI-II), Mental Developmental Index (MDI), and Physical Developmental Index (PDI). The results revealed that spontaneously conceived children had a higher birth weight than those conceived artificially. However, at 24 months, there was no significant difference in weight between the two groups but there were significant differences in terms of PDI, which assesses fine and gross motor skills. Spontaneously conceived infants had a higher mean on the PDI compared to their counterparts. In terms of mental development, there was no correlation between method of conception and MDI.

The results suggest that type of conception method may influence birth weight, gestational age, and physical development at 2 years of age. This study adds to current empirical literature and suggests further examination regarding physical development. More importantly, the study provides information for families considering alternative forms of reproduction.

*This Research Digest is a product of the Nebraska Center for Research on Children, Youth, Families and Schools. The research presented is a sample of state-of-the-art research conducted in the area of Early Childhood Development by faculty at UNL. For more information on the Center, please contact Holly Sexton at [hsexton1@unl.edu](mailto:hsexton1@unl.edu)*