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# 50 years ago in T J P

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## 50 Years Ago in *The Journal of Pediatrics*

Jacqueline M. Lauer, PhD, MPH and Christopher P. Duggan, MD, MPH

Center for Nutrition Division of Gastroenterology, Hepatology and Nutrition Boston Children's Hospital Boston, Massachusetts

In this seminal review, Myron Winick cited animal experiments and human studies on childhood nutritional deprivation, endeavoring to answer “What is the functional result of having survived malnutrition as an infant?” He concluded that there was sufficient evidence linking early childhood malnutrition to permanent neurodevelopmental deficits (i.e., reductions in brain weight and head circumference, cellular proliferation, myelination, and diminished cognition) to shift the bulk of nutrition resources toward the critical period before birth and during early postnatal life. He was a pioneer in his assessment that these deficits have an intergenerational component, and he well anticipated the importance of acknowledging and measuring the social determinants of disease.

Since then, 50 years of mounting evidence has solidified ‘the first 1,000 days’ as the prime target for nutritional interventions. Research on the topic now includes the roles of individual nutrients, systemic inflammation, and breastfeeding on neurodevelopmental outcomes. However, our understanding remains plagued by the same challenges cited by Winick, including the difficulty in establishing causal relationships and the lack of consensus and standardization regarding assessment tools. As a result, growth attainment measures, including linear growth (1) and head circumference, remain frequently utilized surrogates for cognitive development, highlighting the limits of our advancement. Notable improvements in the field include more detailed neuro-imaging, techniques to measure neurophysiologic outcomes, and new development assessment tools.

Conservatively, it is estimated that > 200 million children fail to reach their potential in cognitive development, resulting in reductions in educational achievement, economic productivity, and earnings.(2, 3) Going forward, we must insist on incorporating these outcomes, alongside growth attainment, in the design and interpretation of child nutrition and cognition research.

## References

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