

How Premature Birth Shapes Future Heart Health

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Advancements in neonatal care have led to a growing cohort of preterm-born individuals that have now reached adulthood.

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Advancements in neonatal care have led to a growing cohort of preterm-born individuals that have now reached adulthood. While population-based birth cohorts have provided us with a better understanding of long-term complications of premature birth such as risk for neurodevelopmental impairment, much less is known about potential cardiac consequences.

In a newly released review article in *Pediatrics*([10.1542/peds.2020-0146](#)), Dr. Fernando Telles and colleagues present the first meta-analysis to compare cardiac structure and function between former preterm and term infants from the time of birth to young adulthood. A total of 32 observational studies were included in the review to quantify the impact of preterm birth on the heart across developmental stages. The results were intriguing—former preterm individuals have persistently lower left ventricular diastolic function, right ventricular systolic impairment, and an accelerated rate of left ventricular hypertrophy. The authors proposed that these cardiac alterations may make the heart more vulnerable to secondary insults, which may explain why preterm birth is a risk factor for early heart failure and long-term risk of ischemic heart disease.

As we dig deeper into what's different about the hearts of those born preterm, further longitudinal studies are needed to determine how cardiac remodeling in preterm infants progresses over time. This is particularly important in the adolescent age range, for which there is a paucity of data. While this article adds to our understanding of how premature birth shapes future heart health, a number of questions and research gaps regarding the long-term cardiac outcomes after preterm birth remain including the need for earlier detection of former preterm individuals at higher risk for cardiac issues, screening guidelines, preventative strategies, and a plan for better clinical monitoring. Additional research will hopefully allow us to get to the heart of the matter.

- [Not Crying After Birth as a Predictor of Not Breathing](#)
- [Autism and Congenital Heart Disease: Evidence and Unresolved Questions](#)
- [2019 American Heart Association Focused Update on Neonatal Resuscitation: An Update to the American Heart Association Guidelines for Cardiopulmonary Resuscitation and Emergency Cardiovascular Care](#)
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