

If you were a preemie, take heed for your heart

12 August 2013

Being born prematurely may be linked to important changes in how your heart forms and works as an adult, according to new research in the American Heart Association's journal *Circulation*.

Researchers tracked 102 premature babies from birth into their 20s. Compared to 132 people born at full-term, the study showed that in adulthood:

- The right lower [heart chamber](#) – the [right ventricle](#) – in the former preemies' was smaller but heavier, with thicker walls and less pumping capacity.
- The earlier the birth, the greater the impact was on right ventricle size and function.

"Up to 10 percent of today's young adults were born prematurely and some have an altered higher [cardiovascular risk](#) profile in adult life," said Professor Paul Leeson, who led the group of researchers and is a Cardiologist at the University of Oxford's Cardiovascular Clinical Research Facility in England. "We wanted to understand why this occurs so that we can identify the small group of patients born premature who may need advice from their healthcare provider about this cardiovascular risk. The changes we have found in the right ventricle are quite distinct and intriguing."

Previous research by Leeson's group showed similar, slightly smaller differences in size and function in the heart's left ventricle. In older adults, changes in the right ventricle's structure and function may increase risks of [heart failure](#) and [cardiovascular death](#). However, the researchers are keen to reassure those born prematurely that there was no evidence of these problems in the young people who participated in the current study.

The researchers followed a group of [premature babies](#) born in the 1980s until they were average age 25. In this study, a baby born before the 37th week of pregnancy was considered premature. Those adults were compared with similar aged

adults born at full-term.

The researchers conducted standard heart health evaluations including blood pressure and cholesterol but also used more sophisticated magnetic resonance imaging techniques to measure participants' hearts and blood vessels. With the help of computer programs they developed models of the hearts to analyze their unique structure and work out how much blood is being pumped.

"We are trying to dig deeper into what's different about the hearts of those born preterm," said Adam Lewandowski, B.Sc., D. Phil who undertook the study and is the first author. "The potential scientific explanations for why their hearts are different are fascinating and our study adds to the growing understanding of how premature birth shapes future heart health."

Provided by American Heart Association

APA citation: If you were a preemie, take heed for your heart (2013, August 12) retrieved 2 August 2022 from <https://medicalxpress.com/news/2013-08-preemie-heed-heart.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.