

Study links caesareans and cardiovascular risk

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Credit: Aditya Romansa

A new Australian and New Zealand Journal of Public Health study has

found Australian children who were born via cesarean section (C-section) have a greater risk of cardiovascular disease and obesity, and it's sparked a call to limit the increasingly popular practice.

Dr. Yaqoot Fatima from James Cook University's Murtupuni Center for Rural and Remote Health and Dr. Tahmina Begum from the University of Queensland were part of a team that used data from the Longitudinal Study of Australian Children to analyze the health outcomes of children delivered by C-section.

"C-section births have risen across the world with a disproportionately higher rate in developed countries. In Australia, the C-section birth rate has increased from 18.5% in 1990 to 36% in 2019 and nearly half of Australian babies are projected to be cesarean born by 2045," said Dr. Begum.

She said the study found a relationship between C-section births and [cardiovascular disease](#) (CVD) risk factors in children.

"Four out of six individual CVD risk components and the composite index of the five CVD risk components showed a positive association with C-section birth. Our study also provided a direct relationship between C-section and increased overweight and obesity among children at 10–12 years of age," said Dr. Fatima.

She said there was a biologically plausible reason for linking C-sections to CVD risk factors and obesity.

"There's an altered microbial load from C-section birth as compared to vaginal birth. This altered microbial ecosystem hampers the 'gut-brain axis' and releases some pathogenic toxins that cause metabolic damage," said Dr. Begum.

She said it was also possible the fetal stress from physiological or pharmacological induction of labor during a C-section could also have an effect.

"In Australia in 2020, around 26% of deaths per year in the [adult population](#) were as a result of CVD. Globally, the chronic disease spectrum of CVDs costs trillions due to health service-related expenditures and loss of economic productivity," said Dr. Fatima.

She said the study provides important insights into [health care policy](#) and the strategic direction towards chronic disease risk reduction.

"Growing rates of C-sections conducted for non-clinical reasons is a major public health concern that calls for a reduction in the rate of unnecessary C-sections and their associated human and [economic costs](#)," said Dr. Begum.

More information: Tahmina Begum et al, Longitudinal association between caesarean section birth and cardio-vascular risk profiles among adolescents in Australia, *Australian and New Zealand Journal of Public Health* (2022). [DOI: 10.1111/1753-6405.13288](https://doi.org/10.1111/1753-6405.13288)

Provided by James Cook University

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