

Newborns of South Asian and East Asian descent misclassified as underweight at birth: Study

26 May 2009

Babies of East Asian and South Asian descent are between two and three times more likely to be misclassified as underweight at birth when compared to their Canadian counterparts, according to a study led by St. Michael's Hospital physician Dr. Joel Ray. Dr. Ray and a team of researchers, who developed the first-ever sex-specific birth weight curves for these ethnic groups, suggest the need to consider differences across ethnic groups to reduce parental stress and use of health-care resources associated with labelling an infant as underweight, or "small for gestational age" at birth.

The study, an analysis of close to 5,000 infants born at Toronto's St. Michael's Hospital between January 1, 2002 and October 31, 2007, evaluated the birth weights of 2,362 babies of mothers born in Canada and 1,565 and 753 babies born of mothers of East Asian and South Asian descent respectively. Birth weight curves were generated for males and females babies of the ethnic groups.

"Birth weight curves currently used in Canada were derived back in 1969, and were based on a small sample of just 300 infants of white European ancestry," Dr. Ray explained. "While these conventional values have been updated, they do not account for the country's ever growing variation in ethnicity. With 60 per cent of all Canadian immigrants originating from South and East Asia, much needed curves are now available so that, for the first time, physicians have better tools to assess [birth weight](#) and direct neonatal care."

Newborns labelled underweight at birth are thought to have a higher likelihood of being short in stature and display less cognitive ability in math and reading comprehension in early and middle life, and are less likely to attain higher-income

professional or managerial jobs. What's more, labelling an infant as underweight at birth can also lead to a greater use of health resources since they need special follow-up with a pediatrician in the weeks and months after birth.

According to the study, between 19 and 34 per 1,000 infants born to mothers of East Asian origin and between 80 and 84 per 1,000 infants born to mothers of South Asian origin would be miscategorized as small for gestational age at birth. The researchers also found that infants of Canadian-born mothers weighed, on average, 144 grams and 218 grams more than newborns of mothers of East Asian and South Asian origin.

"We recommend that our curves be tested on more Canadians, and be expanded to other ethnic groups, as well," said Dr. Ray. "More importantly, careful use of these curves should be mandated in their application to infants of [mothers](#) of East Asian and South Asian origin."

St. Michael's Hospital is a large and vibrant, teaching and research hospital in the heart of Toronto. Fully affiliated with the University of Toronto, St. Michael's Hospital leads with innovation, and serves with compassion. Renowned for providing exceptional patient care, St. Michael's Hospital is a regional trauma centre and downtown Toronto's designated adult trauma centre.

Source: St. Michael's Hospital

APA citation: Newborns of South Asian and East Asian descent misclassified as underweight at birth: Study (2009, May 26) retrieved 23 September 2022 from <https://medicalxpress.com/news/2009-05-newborns-south-asian-east-descent.html>

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