

# The babies of women who consume carbohydrate-rich foods during pregnancy have an altered growth trajectory

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Babies born to women who have a sugary diet during pregnancy have a higher body mass index, according to a new study by Singaporean researchers.

Childhood obesity has steadily increased in recent decades, and is associated with a higher risk of [cardiovascular disease](#) and type 2 diabetes in later life. Although there's some evidence that gaining substantial amounts of weight during pregnancy can increase the child's obesity risk, little is known about how the specific foods a woman eats affect her baby's weight.

To investigate, Ling-Wei Chen at the National University of Singapore, and his colleagues, Mary Chong and Yung Seng Lee at the Singapore Institute for Clinical Sciences interviewed 1,127 women of Chinese, Malay or Indian background when they were 26–28 weeks pregnant about their diet during that period.

Once their babies were born, they were weighed at regular intervals to track their growth. The childhood [body mass index](#) (BMI) curve is characterized by a peak occurring around 6 to 12 months, and previous research has shown correlation between a higher peak at this age and later adverse health outcomes.

The team found that a woman's [carbohydrate intake](#), particularly the

amount of sugar they consumed, during pregnancy, was associated with more rapid [weight gain](#) and a higher peak BMI during infancy—even though it didn't significantly affect the babies' birth weight. A high carbohydrate intake was also associated with a higher BMI when the children were assessed at 2, 3 and 4 years of age, suggesting the effect may be long-lasting—although follow-up studies are needed to confirm this. The children in the study are now seven, and continue to be monitored. Women's fat and protein consumption had no apparent impact on children's BMI.

"One of the novelties of this study is that it is performed on an Asian population, where there is a lack of research," says Chen. "It's also important, because Asians tend to have higher risk for diseases such as cardiovascular disease, even at the same BMI."

Given that high sugar intake during pregnancy is already known to associate with excessive [pregnancy weight](#) gain and higher risk of gestational diabetes, Chen says it may be prudent for pregnant women to avoid foods and beverages high in sugar. The World Health Organization recommends getting no more than ten per cent of total daily energy intake from free sugars.

**More information:** Ling-Wei Chen et al. Associations of maternal macronutrient intake during pregnancy with infant BMI peak characteristics and childhood BMI, *The American Journal of Clinical Nutrition* (2017). [DOI: 10.3945/ajcn.116.148270](https://doi.org/10.3945/ajcn.116.148270)

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