

# Children born by cesarean section may have a greater risk of obesity

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Children delivered by Cesarean section may have an increased risk for obesity compared to children born vaginally, according to research presented at the American Heart Association's Scientific Sessions 2016.

Compared to vaginally-delivered children, Cesarean-delivered children had 40 percent greater odds of becoming overweight or obese in childhood. This association was even greater if their mother was overweight or obese, suggesting that among [obese mothers](#) vaginal delivery may help reduce the intergenerational association of obesity.

This finding held even after accounting for the mother's age at the time of delivery, race, education, pre-pregnancy body mass index, pregnancy weight gain, [air pollution exposure](#), and the child's birth weight.

The researchers noted that having an overweight mother is often associated with overweight or [obese children](#), regardless of how the child is born, but the effect was stronger among women who delivered via Cesarean section.

"We think that the reason for the difference may be due to the beneficial microbes found in the birth canal that newborns are exposed to during a vaginal birth," said lead study author Noel Mueller, Ph.D., M.P.H., an assistant professor of epidemiology at Johns Hopkins University. "We suspect that these microbes may benefit a child's health, including enhancing metabolism and training the immune system."

"We need more studies to determine whether exposing Cesarean-delivered newborns to vaginal microbes at birth can reduce their future risk of metabolic disorders such as obesity."

Researchers analyzed data on 1,441 full-term deliveries from the Boston Birth Cohort. Among the study group, 57 percent of the women who gave birth by Cesarean were obese, and 53 percent of those who delivered vaginally were obese. Children ranged from ages two to eight at the time of outcome measurement.

Provided by American Heart Association

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