

Maternal glycemic status linked to epigenetic changes

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(HealthDay) -- Maternal glycemic status and adiponectin levels are linked to epigenetic changes in the adiponectin gene (*ADIPOQ*), according to a study published online March 6 in *Diabetes*.

Noting that [adiponectin](#) is the most abundant circulating hormone secreted by adipocytes, Luigi Bouchard, Ph.D., from the Université de Sherbrooke in Canada, and colleagues analyzed the association between maternal glycemic status and methylation of *ADIPOQ* in placenta tissue, maternal circulating blood cells, and cord blood cells in 98 women with a singleton pregnancy recruited during their first trimester.

The researchers found a significant association between lower DNA methylation levels on the fetal side of the placenta and higher maternal

[glucose](#) levels during the second trimester, and a significant association between lower DNA methylation levels on the maternal side of the placenta and higher insulin resistance index during the second and third trimesters. In addition, there was also a significant association between lower DNA methylation levels and higher maternal circulating adiponectin levels throughout pregnancy.

"In conclusion, the *ADIPOQ* DNA methylation profile was associated with maternal glucose status and with maternal circulating adiponectin concentration," Bouchard and colleagues write. "Because adiponectin is suspected to have insulin-sensitizing properties, these epigenetic adaptations have the potential to induce sustained glucose metabolism changes in the mother and offspring later in life."

More information: [Abstract](#)
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