Birth weight affected by warm temperatures during pregnancy

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Ben-Gurion University of the Negev (BGU) and Harvard University researchers have developed a technique that measures the correlation between air temperature and birth weight. They evaluated the relationship between birth outcomes (focusing on birth weight) and ambient air temperature during pregnancy in Massachusetts between 2000 and 2008.

"We found that exposure to high air temperature during pregnancy increases the risk of lower birth weight and can cause preterm birth," according to Dr. Itai Kloog, a senior lecturer in BGU's Department of Geography and Environmental Development. "An increase of 8.5 °C in the last trimester of average exposure was associated with a 17g decrease

in [birth weight](#) of babies born full term after adjusting for other potential risk factors."

The paper, "Using Satellite-Based Spatiotemporal Resolved Air Temperature Exposure to Study the Association between Ambient Air Temperature and Birth Outcomes in Massachusetts" was recently published in the *Environmental Health Perspectives* journal.

Together with his colleagues, Dr. Kloog developed a "high resolution air temperature estimation model" to predict daily [air temperature](#) by kilometer and address level exposure during various prenatal exposure periods from date of conception through birth for each mother.

"With the increase in temperatures over the last century and continued emissions from greenhouse gases, more attention is being focused on effects from heat," Kloog says.

Provided by American Associates, Ben-Gurion University of the Negev