Neighborhood deprivation tied to gestational diabetes risk

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Neighborhood deprivation is associated with gestational diabetes mellitus (GDM), with body mass index explaining a considerable proportion of the relationship, according to a study published online Feb. 1 in *Obstetrics & Gynecology*.

Emily F. Liu, M.P.H., from Kaiser Permanente of Northern California in Oakland, and colleagues evaluated whether having a pregnancy in a deprived neighborhood was associated with an increased risk for GDM. The analysis included 214,375 pregnant individuals within Kaiser Permanente Northern California (2011 to 2018). Neighborhood deprivation was estimated using an index aggregating multiple indicators of census tract-level sociodemographic information.

The researchers found that gestational diabetes prevalence increased with neighborhood deprivation from 10.0 percent in the lowest Neighborhood Deprivation Index quintile to 12.7 percent in the highest quintile.

Compared with individuals in the least deprived neighborhoods (quintile 1), pregnant individuals in quintiles 2 to 5 had a higher risk for GDM when adjusted for maternal age, parity, insurance type, and residential history. There was a significant dose-response relationship between the relative risk for GDM and increasing quintile of neighborhood deprivation. The association was mediated by prepregnancy body mass index (45.8 percent).

"Study findings suggest that the social and physical environment prior to and during pregnancy may influence the risk of GDM," the authors write.

More information: Emily F. Liu et al, Association Between Neighborhood Deprivation in Early Pregnancy and Gestational Diabetes Mellitus, *Obstetrics & Gynecology* (2024). DOI: 10.1097/AOG.0000000000005521