Challenges in Modeling Associations Between Environmental Exposures and Pregnancy Outcomes

A growing number of studies have linked exposure to air pollutants to pregnancy outcomes, including gestational age at delivery and birth weight. These studies face numerous challenges of both a practical and statistical nature. We consider statistical models for evaluating associations between exposures, including pollutants and behavioral factors, and birth outcomes and discuss challenges including study design and expense, multipollutant exposures, susceptible windows in pregnancy, mobility, and variability in exposure over space and time.

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