Risk for Preterm and Very Preterm Delivery in Women Who Were Born Preterm

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OBJECTIVE: To evaluate whether women who themselves were born preterm are at increased risk of preterm delivery and, if so, whether known maternal complications of preterm birth such as hypertension or diabetes explain this risk.

METHODS: We conducted a population-based cohort study of all women born preterm (51,148) and term (823,991) in Québec, Canada, between 1976 and 1995; after frequency matching 1:2 preterm to term, we examined the relationship of preterm birth between women and their offspring.

RESULTS: The study included 7,405 women who were born preterm (554 before 32 weeks of gestation and 6,851 at 32–36 weeks of gestation) and 16,714 women born term, who delivered 12,248 and 27,879 newborns, respectively. Overall, 14.2% of women born before 32 weeks of gestation, 13.0% of 32–36 weeks of gestation, and 9.8% of those born term delivered prematurely at least once during the study period, including 2.4%, 1.8%, and 1.2%, respectively, who delivered very preterm (both P<.001 for trend). After adjustment for factors including own birth weight for gestational age and pregnancy complications, the overall odds of preterm first live delivery associated with being born preterm was elevated by 1.63-fold (95% confidence interval [CI] 1.22–2.19) for women born before 32 weeks of gestation and 1.41-fold (95% CI 1.27–1.57) for those born at 32–36 weeks of gestation relative to women born term.

CONCLUSION: Women who themselves were born preterm are at increased risk of delivering their neonates prematurely. This is independent of prematurity risks associated with hypertension and diabetes.