

Partner social support during pregnancy and the postpartum period and inflammation in 3-month old infants

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Abstract

Prenatal social stress “programs” offspring immune activity in animal models, but how the prenatal social environment affects human offspring inflammation is not known. Here, we test associations between prenatal partner support quality, i.e. positive/helpful support, negative/upsetting support, and their interaction, and infant inflammatory markers. A sample of 113 women from the Alberta Pregnancy Outcomes and Nutrition (APrON) cohort were followed from early pregnancy to 3-months postpartum. Partner support quality was measured during pregnancy and the postpartum period. Three-month-

old infant blood samples were assayed for inflammatory markers, i.e., adaptive immune markers IFN γ , IL12p70 and IL10. The prenatal positive-by-negative partner support interaction predicted infant IFN γ , IL12p70, and IL10, p 's<.035, independent of covariates and postpartum partner support. When negative partner support was high, high positive support predicted higher infant IFN γ , IL12p70, and IL10. As such, partner support during pregnancy that is both highly negative/upsetting and also highly positive/helpful predicted adaptive immunity markers in infants at 3 months of age.

Keywords: Social support, Pregnancy, Postpartum period, Infant, Inflammation