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## The impacts of gestational weight gain in Aboriginal populations in North America: a scoping review

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**Background:** With approximately 940 million individuals overweight and 400 million obese globally, this poses a risk to the health of future offspring.<sup>1</sup> As obesity levels continue to rise, gestational weight gain (GWG) is also on the rise.<sup>2</sup> Current literature suggests that the amount of weight gained throughout pregnancy impacts both maternal and fetal health.<sup>2</sup> To date, a review on GWG and the resulting outcomes in Aboriginal populations has not been conducted. This scoping review aims to address this void and shed light on the importance of proper prenatal care and decisions made throughout pregnancy.

**Research Question:** What is known in the current literature on the outcomes associated with GWG in Aboriginal populations throughout North America?

**Methodology:** A scoping review methodology was used to search *Embase*, *Medline*, *CINAHL*, and *Web of Science* databases in March 2015. A total of 38 articles were identified. Articles were reviewed for specific inclusion criteria – GWG studied in Aboriginal populations in Canada and the United States. GWG was classified as inadequate, normal, or excessive as established by the Institute of Medicine.<sup>2</sup> Discrepancies on the eligibility of articles based on the inclusion criteria were discussed and resolved. Afterwards, twelve articles met the inclusion criteria.

Data was abstracted, which included the authors, year of publication, location, population, sample size, methodology, intervention, outcome, and important results.

**Findings:** Aboriginal women with inadequate GWG were at an increased risk of gestational diabetes mellitus and preterm birth, were more likely to have children with Fetal Alcohol Syndrome or Effect, had lower proportions of male infants, and were at a decreased risk of preeclampsia.<sup>3-7</sup> Aboriginal women with excessive GWG were at an increased risk of perineal and vaginal trauma, infant macrosomia, preeclampsia, postpartum weight retention, having obese children, and having male infants.<sup>3,6-9</sup> Lack of knowledge on recommended GWG, poor support, and improper nutrition during pregnancy gave rise to high levels of inadequate and excessive GWG in Aboriginals.<sup>10,11</sup>

**Conclusions:** This scoping review provides an overview of the existing yet insufficient literature on GWG in Aboriginal populations in North America. Given the severity of GWG outcomes in Aboriginal populations, further research and knowledge translation is needed.

### Global Health Relevancy

Inadequate and excessive GWG are major global issues. Out of 70 countries studied, only 13 had GWG guidelines.<sup>12</sup> Of the countries with GWG guidelines, recommended GWG varied and often used different BMI cut-offs. In 2003, 30.6% and 19.5% of pregnant women in the United States had excessive and inadequate GWG, respectively.<sup>2</sup> With poor surveillance and reporting measures on a global scale, it is difficult to determine the burden GWG has on maternal and infant health.