Title

Interpregnancy weight change and neonatal and infant outcomes: A systematic review and meta-analysis

Abstract

Purpose: To synthesize evidence regarding the association between interpregnancy weight change (IPWC) in consecutive pregnancies and neonatal or infant outcomes in the subsequent pregnancy. Methods: Search strategy was implemented in MEDLINE, EMBASE, Web of Science, Scopus and Cochrane Library from their inception to 13 November 2023. The most adjusted odds ratio (OR) or risk ratio estimates provided by original studies were used to calculate pooled risk ratios and their corresponding 95 % confidence intervals (CI) with the DerSimonian and Laird random effects method. Publication bias was assessed by funnel plots and Egger's method, and risk of bias was assessed with The Newcastle[sbnd]Ottawa Quality Assessment Scale. Results: Thirty-seven observational studies were included. Interpregnancy weight loss or gain were associated with large for gestational age (OR: 0.89; 95 % CI: 0.84–0.94; I2 = 83.6 % and OR: 1.33; 95 % CI:1.26–1.40; I2 = 98.9 %), and stillbirth risk (OR: 1.10; 95 % CI: 1.01–1.18; I2 = 0.0 % and OR: 1.21; 95 % CI: 1.09–1.33; I2 = 60.2 %,). Conclusions: Findings highlight the importance of managing weight between interpregnancy periods, although these findings should be interpreted cautiously because of the possible influence of social determinants of health and other factors.

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