

Caesarean Section and Offspring Obesity in Young Adulthood: Update of a Systematic Review with Meta-Analysis

Yannick Graf

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Caesarean section (CS) might be associated with a higher risk of offspring obesity in young adulthood compared to vaginal delivery (VG). We updated a systematic review with meta-analysis of studies evaluating this association. Evidence published since 1st April 2014, namely the end date of searches from the most recent systematic review, was considered. Out of 3,774 abstracts identified on PubMed and Embase, six studies were retained, of which four were included in the meta-analysis. In addition, five studies of the last systematic review regarding the effect on young adulthood were considered in our meta-analysis. The nine studies analysed had a cohort design and included overall 143,869 participants. A higher risk of obesity for young adult born by CS compared to adults born by VD was found using crude estimates (pooled risk ratio (RR): 1.30 [95% confidence interval (CI) 1.13 to 1.50, I²:49%]) and maximally adjusted estimates (RR: 1.22 [95% CI 1.02 to 1.46, I²:63%]). Adjustment methods vary across the studies and there was a high between-study heterogeneity. In analyses restrained to the five studies with adjustment for maternal pre-pregnancy body mass index (BMI), considered as a major potential confounding factor, the RR was 1.08 [95% CI 0.92 to 1.27, I²:23%]. We conclude that the association between CS and obesity in young adulthood is due to confounding notably by maternal pre-pregnancy body weight.

Leiter: Prof. Arnaud Chiolerio, MD PhD, University of Fribourg