Associations between lifestyle interventions during pregnancy and childhood weight and growth: a systematic review and meta-analysis

‘Maternal health and lifestyle during pregnancy may be critical for the onset and progression of childhood obesity. Prenatal lifestyle interventions have been shown to positively affect maternal behaviors, gestational weight gain, and anthropometric outcomes in infants at birth.’ Equally, the impact of lifestyle behaviours during pregnancy on child weight or growth beyond birth is unknown.

The purpose of the systematic review was to examine the association between lifestyle behaviours during pregnancy and anthropometric outcomes (weight, height, BMI) during childhood.

A literature search was conducted, followed by a rigorous screening process to narrow down to twenty trials comprising 11,385 women that would provide useful insights into the association. The studies included in the review were qualitative and quantitative randomised control trials looking at lifestyle pre-pregnancy, BMI, and anthropometric data at 1 month of age or older.

Their results suggest that there is no strong evidence to suggest that lifestyle during pregnancy influences child weight and BMI. However, there is a need for larger and higher quality studies with follow-up across the life to better understand the short-and long-term weight and growth outcomes following interventions during the preconception, prenatal and postnatal period. To date, few interventions have been adapted to socioeconomically disadvantaged populations thus adapting interventions to increase and assess the applicability of these findings across different settings at risk of developing childhood obesity is needed.