

Relationships between eating behavior, brain responses to food viewing and metabolic health outcomes in women with gestational diabetes

During pregnancy and especially in women with gestational diabetes, maintaining a healthy body weight is important to improve obstetric and neonatal outcomes. However, excess gestational weight gain is frequent in pregnant women and especially in those with gestational diabetes. It is hypothesized that, increased cravings and intake of high-energy foods especially in the third trimester contributes to excess gestational weight gain. Apart from cravings, emotions and chronic stress influence eating behavior during pregnancy by triggering increased intakes of high-energy foods. Neuroimaging studies show that high-energy foods stimulate the brain's reward and motivation regions by increasing neural reactivity to food cues. To date, studies on food cravings during pregnancy involved the use of only questionnaires. No study has so far shown any objective correlates or mechanistic pathways to describe or explain the reasons for increased cravings in pregnancy. Therefore, the objective of this project is to investigate eating behavior and brain responses to food viewing and their relationship with metabolic health during and after pregnancy in healthy women and in high-risk pregnant women with gestational diabetes.