

**Associations of body mass index (maternal BMI) and gestational diabetes mellitus (GDM) with neonatal and maternal pregnancy outcomes in a multicentre European database (Diabetes and Pregnancy Vitamin D And Lifestyle Intervention for Gestational Diabetes Mellitus Prevention (DALI)).**

To assess the impact of Gestational Diabetes Mellitus (GDM) and obesity on neonatal and maternal pregnancy outcomes, seven countries participating in the DALI project combined datasets. These dataset contained characteristics of pregnant women (including body mass index (BMI), a measure over body fatness, pregnancy related illnesses, method of delivery and birth outcome) and characteristics of the babies (including neonatal morbidities). The final database contained data on 3343 pregnancies.

Statistical analysis was performed to assess the potential influence of GDM and obesity on the occurrence of caesarean section, macrosomia (babies' birth weight more than 4.5 KG) and neonatal morbidities.

The analysis showed that, when corrected for confounding characteristics, obesity and GDM were risk factors of complications around the time of birth:

- Increased maternal BMI ~ increased chance of a caesarean section
- Increased maternal BMI ~ increased chance baby had macrosomia
- Maternal GDM or BMI over 30 KG/m<sup>2</sup> (obese) ~ increased chance of neonatal illness of the baby

Obesity and GDM were independent risk factors of complications around the time of birth. The effect of the worldwide obesity and diabetes epidemic is extending to the next generation.