

Age and BMI can predict likelihood of developing gestational diabetes, new research suggests

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Age and body mass index (BMI) are important risk factors for gestational diabetes mellitus (GDM) particularly amongst South Asian and Black African women finds new research published today (02 November) in *BJOG: An International Journal of Obstetrics and Gynaecology*.

The study looked at the link between [maternal age](#), BMI and racial origin with the development of GDM and how they interact with each other.

Data were collected on 585,291 pregnancies in women attending for antenatal care and delivery at 15 maternity units in North West London from 1988-2000. The study included 1,688 women who developed GDM and 172,632 who did not.

Maternal age was divided into the following groups: below 20, 20-24, 25-29, 30-34, 35-39 and above 40 years of age.

Maternal BMI was also divided according to the WHO international classification of BMI as follows: less than 18.5 (underweight), 18.50-24.99 (normal weight), 25.00-29.99 (overweight) and more or equal to 30.00 (obese). Prevalence of GDM was calculated for each maternal age and BMI group.

There was a strong association between GDM development and advancing maternal age which varied by racial group.

Using White [European women](#) age 20-24 years as a comparison group, White European women older than 30 years had significantly higher odds ratios (ORs) for developing GDM.

The ORs for GDM development were also significantly higher in the other [racial groups](#) but at a younger maternal age (older than 25 years if they were Black Africans or Black Caribbeans and older than 20 years if they were [South Asians](#)). Moreover, the rate of GDM rose more rapidly with age. For example, in mothers aged 40 years or more, the rate of GDM had risen to 1.9% in white European mothers (from 0.5% at age 20-24), but to 11.4% in South Asians (from 1.1) and 21.7% in [black Africans](#) (from 0.7%).

White European women under the age of 20 were the only group to have significantly lower ORs for developing GDM.

In addition, there was also a strong link between GDM and BMI in all the racial groups. Using White European women with a normal BMI as the comparison group, the ORs for developing GDM were significantly higher in the overweight and obese White European and Black Caribbean groups and significantly higher in all BMI categories of Black African and South Asian women.

Dr Makrina Savvidou, Consultant in Obstetrics and Fetal Medicine, Academic Department of Obstetrics and Gynaecology, Chelsea and Westminster Hospital and co-author of the paper said:

"Gestational diabetes complicates 3-5% of pregnancies. Currently in the UK, the National Institute for Health and Clinical Excellence recommends a diagnostic test for gestational diabetes in women with traditional risk factors, such as increased [body mass index](#), family or previous personal history of gestational diabetes, delivery of a large baby and racial origin with a high prevalence of diabetes.

"However, this new research shows that maternal age, alone and in correlation with the maternal racial origin, may also be a significant factor contributing to the development of gestational diabetes. Age has not been included as one of the screening criteria because the secular increase in maternal age over recent years would have resulted in offering a diagnostic test for gestational diabetes to a high proportion of the pregnant population.

"It is important that clinicians are aware of all the contributing factors as [gestational diabetes](#) can result in adverse perinatal outcomes."

Mike Marsh, Deputy Editor-in-Chief of BJOG added:

"It is crucial that women are aware of the benefits of healthy eating and weight control prior to pregnancy as this may reduce the risk of them developing diabetes in pregnancy. Avoiding being overweight prior to pregnancy is particularly important for older [women](#) of South Asian and Black African racial origin."

Provided by Wiley

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