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# The Pre-Pregnancy Body Mass Index and Gestational Weight Gain for Women With Gestational Diabetes Mellitus

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**Purpose:** Gestational diabetes mellitus, an obstetric disease that affects the health of pregnant women, is one of the key factors associated with perinatal mortality or disease. The purpose of this study was to explore the impact of pre-pregnancy body mass index and gestational weight gain on perinatal outcomes for women with gestational diabetes mellitus.

**Methods:** With a retrospective study design, participants were women who received prenatal checkups and gave birth at the two hospitals from 1995 to 2011 and received a diagnosis of gestational diabetes mellitus by an obstetrician. A trained research assistant collected the participants' data in each hospital's archives room. Researcher used a retrospective case-study method to identify women who received a gestational diabetes mellitus diagnosis between 1995 and 2011.

**Results:** Women with gestational diabetes mellitus and with an overweight pre-pregnancy body mass index were more likely to have cesarean deliveries and to use diabetes medications after delivery. Their newborns also had a higher birth weight. In addition, gestational hypertension and cesarean delivery were more common in women with gestational diabetes mellitus and with excessive gestational weight gain than in women with gestational diabetes mellitus and with normal gestational weight gain. The newborns of women with gestational diabetes mellitus and with excessive gestational weight gain had higher birth weights and more nuchal cord than those of women with gestational diabetes mellitus and with normal gestational weight gain. More women with gestational diabetes mellitus and with an excessive gestational weight gain underwent blood glucose monitoring than did women with gestational diabetes mellitus and with a normal gestational weight gain. Because this study was conducted using a retrospective case-study design, the impact of pre-pregnancy body mass index or gestational weight gain on physiological indicators related to the participants' health could not be analyzed.

**Conclusion:** Women with gestational diabetes mellitus, the pre-pregnancy weight and gestational weight gain significantly affected perinatal outcomes in both the women themselves and their newborns. Health care providers should emphasize the impact of pre-pregnancy body mass index and gestational weight gain on the perinatal health of women with gestational diabetes mellitus.

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**Title:**

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**Keywords:**

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**References:**

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**Abstract Summary:**

Health care providers should emphasize the impact of pre-pregnancy BMI and GWG on the perinatal health of women with GDM in prenatal visit. It is necessary to provide childbearing women with additional health education in the areas of health promotion, nutrition, weight control, exercise, and maintaining regular everyday lives.

**Content Outline:**

I. Introduction
A. Gestational diabetes mellitus (GDM) correlates with either a high pre-pregnancy body mass index (BMI) or excessive gestational weight gain (GWG).
B. Studies exploring the effects of a high pre-pregnancy BMI or a high GWG on women with GDM and their newborns are few

II. Body
A. Main Point #1 Demographic characteristics of women with GDM

B. Main Point #2 The impact of pre-pregnancy weight (not overweight or overweight) on perinatal outcomes

C. Main Point #3 The impact of GWG (normal GWG or excessive GWG) on perinatal outcomes

D. Main Point #4 The impact of pre-pregnancy BMI plus GWG on perinatal outcomes

III. Conclusion
A. The pre-pregnancy weight and GWG significantly affected perinatal outcomes in both the women themselves and their newborns. In particular, GWG had a greater impact on women with GDM and their newborns.

B. Health care providers need to vigorously promote the importance of postpartum blood-glucose monitoring for women with GDM.

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