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[Archives](#)
[Fast Track Issue](#)
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Home > Vol 96, No 1 > **Titapant**

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### Is the U.S. Institute of Medicine Recommendation for Gestational Weight Gain Suitable for Thai Singleton Pregnant Women?

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#### Abstract

**Objective:** To compare the gestational weight gain of healthy Thai singleton pregnant women with the U.S. Institute of Medicine (IOM) recommendation.

**Material and Method:** One thousand eight hundred forty nine medical records of uncomplicated singleton pregnant women who delivered at Siriraj Hospital between January 2007 and November 2010 were reviewed. All subjects were divided into four subgroups according to their pre-pregnancy body mass index (BMI): underweight (<18.5 kg/m<sup>2</sup>), normal weight (18.5-24.9 kg/m<sup>2</sup>), overweight (25.0-29.9 kg/m<sup>2</sup>), and obese group (≥30 kg/m<sup>2</sup>). Their baseline characteristics and gestational weight gain were collected and reported. One-way analysis of variance test was used to compare continuous data and Chi-squared test was used to compare discrete data among groups.

**Results:** Mean gestational weight gain of normal weight, underweight, overweight, and obese women were 14.2±4.7 kg, 14.1±4.3 kg, 12.4±4.7 kg, and 10.8±4.3 kg and gestational weight gain between 25th to 75th percentile were 11.0 to 17.0 kg, 11.0 to 16.5 kg, 10.0 to 15.0 kg, and 8.0 to 13.0 kg for pregnant women with pre-pregnancy normal weight, underweight, overweight and obesity respectively. Significant difference of maternal age, gestational weight gain, neonatal birth weight, and parity were found among groups (p<0.05). About one-third of pre-pregnancy normal BMI (39.2%), overweight (36.6%), and obese (31.9%) as well as nearly half of pre-pregnancy underweight group (47.6%) gained the appropriate weight based on the U.S.IOM recommendation. About one-third of pre-pregnancy underweight (37.9%) and normal BMI group (30.6%) gained less than the recommendation. Majority of pre-pregnancy overweight (52.3%) and obese (63.8%) group gained more weight than the recommendation.

**Conclusion:** Although pregnancy outcomes were normal, less than half of Thai pregnant women gained the appropriate weight based on the U.S.IOM recommendation.

**Keywords:** U.S.IOM recommendation, Gestational weight gain, Thai singleton pregnant women

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