

**DOES LOW BODY MASS INDEX LEAD TO LOW BIRTH WEIGHT INFANT**  
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Pregnancy is a prime example of physiological synergism in which the mother , foetus and placenta collaborate to sustain and nurture new life. Although much reminds to be learned about the role of nutrition in modifying this process, it is well accepted that the mother's food habits and nutritional status before conception , as well as during pregnancy , influence the outcome of the pregnancy. Weight gain in pregnancy is an important indicator of nutritional status of the mother and foetus in normal women. The main objective is to study the effect of BMI and weight gain on the birth weight of the baby. The study was conducted in 130 primiparous women admitted in the obstetrics and gynecology ward in Sri Ramachandra Hospital. Anthropometric data like height, pre-pregnancy weight , BMI and weight gain was recorded and compared with the birth weight of the infant. The mean of Low BMI of subjects was  $18.362 \pm 1.272$  and the mean of normal BMI of subjects was  $21.919 \pm 1.651$ . The mean of weight gain for low BMI subjects was  $13.6 \pm 2.17$  and for the normal BMI of subjects is  $11.3 \pm 2.34$ . the observation in this study with respect to maternal body mass index and neonatal birth weight was significant(99.9%) though the maternal body mass index was low, these group subjects would also delivered neonates with normal body weight because of this appropriate weight gain during the gestational age, according to their BMI. The data was statistically analyzed and it was concluded that the women with low BMI can also deliver an infant with normal birth weight, provided her weight gain during the gestational period should be appropriate to her BMI.