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# Impact of vitamin D status during gestation period on low birth weight

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**ABSTRACT :** Low birth weight has been defined by the World Health Organization (WHO) as weight at birth of less than 2,500 g. From conception to birth, the weight of human fetus increases six millions. This rapid growth requires a continuous supply of energy and nutrients which the fetus is unable to synthesize. Maternal socio-economic status, mother's nutrition and diet, lifestyle and other exposures including disease or complications such as hypertension can affect fetal growth and development. Maternal malnutrition causes birth weight reduction. A positive correlation has been seen between maternal and child vitamin D levels. Maternal vitamin D deficiency in early pregnancy has been associated with elevated risk of preterm birth or low birth weight. Low maternal vitamin D status may also slow neonatal cardiac development and alter brain morphology of infant. More recent studies may support the use of vitamin D supplementation during pregnancy to prevent LBW. Maternal total serum calcium levels decline as the pregnancy progresses but during the third trimester, the fetus maintains higher serum calcium levels as a result of active transport of the mineral across the placenta which leads to the low level of calcium in mother. Women at risk of vitamin D deficiency should be monitored and treated during pregnancy for vitamin D deficiency. LBW continues to be a problem of concern as disorders related to LBW and preterm birth are the leading causes of infant mortality. Studies are needed to investigate vitamin D requirements during pregnancy to derive guidelines for health professionals.

**KEY WORDS :**

Vitamin D,  
Low birth weight,  
Calcium

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