**Maternal vitamin D deficiency and GDM risk: evidence for the case of investing more attention in antenatal clinics**

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**Abstract**

Gestational diabetes mellitus (GDM) is a global public health problem, and in India, it affects about 20% of pregnancies. India, despite being a tropical country with abundant sunshine has a high prevalence (80%) of vitamin D deficiency (VDD) among reproductive-aged women. Global and Indian evidence links VDD with a higher risk of hyperglycaemia in pregnancy and GDM. VDD has also been implicated in gestational hypertension, preterm birth and poorer offspring health. Global scientific consensus acknowledges the need for maternal vitamin D screening and supplementation, but knowledge gaps exist about optimal blood levels (50–100 nmol/l), and the required vitamin D dosage (400–4000 IU). Diet can provide <10% of the vitamin D requirements, food fortification can deliver limited amounts, and hence optimal antenatal supplementation is key. Prenatal calcium supplements containing 400 IU of vitamin D may be sufficient for calcium absorption and bone health, but may not provide immunomodulatory benefits, including GDM prevention. Increasing evidence calls for higher maternal vitamin D requirements (2000–4000 IU) for skeletal, metabolic and immune health benefits. Current screening and supplementation for maternal VDD in India is low. We need to invest in future studies to determine optimal maternal vitamin D requirements and formulate policies for vitamin D supplementation to prevent GDM. Improving the maternal vitamin D status is an important nutritional priority for policymakers to reduce the large economic burden of non-communicable diseases (10% of India's gross domestic product), and eventually achieve the 2030 UN sustainable development goals.