

## Vitamin D Supplementation in Tunisian Pregnant Women: Needs More Evidence?

Dear Editor,

Vitamin D deficiency in pregnancy remains widespread globally.<sup>[1]</sup> Adequate Vitamin D status is needed for optimal pregnancy outcome. Very high prevalence of Vitamin D deficiency was reported in Tunisian mothers (98%) and their newborns (97%) with severe deficiency in most cases.<sup>[2,3]</sup> Vitamin D deficiency exposes to adverse outcomes such as osteomalacia, preeclampsia, gestational diabetes, cesarean delivery, genital infection, preterm birth, low birth weight, hypocalcemia, and neonatal rickets.<sup>[4]</sup> Previous Tunisian studies reported the association between inadequate Vitamin D status and the risk of fetal neural tube defects<sup>[5]</sup> and preeclampsia.<sup>[6]</sup> Although Tunisia is a sunny country, sun exposure was reported to be insufficient and dietary Vitamin D intake does not achieved the dietary reference intakes in most women.<sup>[2,3]</sup> Thus, Vitamin D supplementation is needed.

There are persistent controversies about the need and the effectiveness of Vitamin D supplementation during pregnancy to improve pregnancy outcome.<sup>[7,8]</sup> Recent updated Cochrane review states that supplementing pregnant women with Vitamin D increases serum 25-hydroxyvitamin D (25 (OHD)) at term and may reduce the risk of preeclampsia, low birth weight, and preterm birth.<sup>[9]</sup> However, the review concluded that there were insufficient data to advise Vitamin D supplementation during pregnancy and recommended further high-quality research to answer more evidence of the effectiveness of Vitamin D supplementation on maternal and offspring outcomes.

Recent reviews reported significant increase in circulating 25 (OHD) in pregnant women who received Vitamin D supplementation and suggested that Vitamin D supplementation can safely be utilized during pregnancy.<sup>[8,9]</sup>

For Tunisian pregnant women, given the high prevalence and the severity of Vitamin D deficiency, it would be relevant to establish Vitamin D supplementation to achieve adequate Vitamin D status. Recent recommendations indicate that pregnant women should receive 600 IU/day of supplemental Vitamin D to ensure adequacy of maternal serum 25 (OHD) levels.<sup>[10]</sup> There is continuing controversy over the appropriate dose of Vitamin D supplementation during pregnancy. The recommendation does not consider the severity of deficiency. Hence, there are some concerns in generalizing recommendations. A recent study conducted in a population of pregnant women with severe Vitamin D deficiency reported that with doses as high as 4000 IU/day, normalization of Vitamin D status was achieved in only

15% of the studied population. In view of the recent literature data, we recommend research to determine the appropriate doses of Vitamin D supplementation in Tunisian pregnant women, and we wish to appeal policies maker for introducing Vitamin D supplementation in the Tunisian prenatal care program.

In conclusion, Vitamin D deficiency is prevalent in Tunisian pregnant women and was reported to be associated with adverse outcomes in mothers and their newborns. We hope for soon Tunisian recommendations of Vitamin D supplementation during pregnancy.

### Financial support and sponsorship

Nil.

### Conflicts of interest

There are no conflicts of interest.

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**Received:** 25 Mar 17 **Accepted:** 11 Jun 17

**Published:** 09 Mar 18

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	<b>DOI:</b> 10.4103/ijpvm.IJPVM_158_17

**How to cite this article:** Imene AD, Emira BH, Zahra M. Vitamin D supplementation in Tunisian pregnant women: Needs more evidence? *Int J Prev Med* 2018;9:32.

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