

WHO Guideline: Vitamin A Supplementation in Pregnant Women. Geneva: WHO, 2011;
WHO Guideline: Vitamin A Supplementation in Postpartum Women. Geneva: WHO, 2011



Shelley McGuire
School of Biological Sciences, Washington State University, Pullman, WA

Background

Vitamin A deficiency remains a significant public health concern worldwide, especially in portions of Africa and Southeast Asia. Indeed, ~19 million pregnant women are thought to be affected by this nutritional deficiency. Because vitamin A deficiency during pregnancy and postpartum periods can severely affect both maternal and infant health, vitamin A supplementation is sometimes suggested. For instance, the WHO in 1998 recommended that, although vitamin A supplementation should not exceed 10,000 IU/d, pregnant women living in areas of endemic vitamin A deficiency should receive daily or weekly doses during the first 60 d post-conception. Similarly, they concluded that many breastfeeding women and their nursing infants would benefit from a high-dose maternal supplement given up to 60 d postpartum. Noteworthy, however, is the legitimate and serious concern about toxic and teratogenic effects of high-dose vitamin A supplementation during these critical periods of growth and development. As such, researchers and public health experts have continued to study the putative effects (both health-promoting and potentially detrimental) of vitamin A supplementation on maternal and infant health during the reproductive cycle.

Rational for and development of new guidance documents

In response to emergent literature on the topic and a request from its member states, the WHO recently re-examined its guidance concerning vitamin A supplementation during the pregnancy and postpartum periods. To accomplish this task, the WHO/UNICEF Steering Committee for Guidelines on Vitamin A Supplementation was established in 2009 to guide the development of 2 related documents (one considering pregnancy and the other postpartum period) and provide overall supervision of the guidance development process. Two additional groups were also formed: an advisory guidelines group

and an external experts and stakeholders panel. The guidelines group met twice (2009 and 2011) to first finalize the scope of the questions and rank the critical outcomes of interest and then subsequently review the evidence, discuss the draft recommendations, and determine their scientific strength. In the process of doing so, the Cochrane Collaboration was commissioned to search, review, and generate systematic reviews, evidence profiles, and summary tables. Cochrane also updated 2 existing reviews on vitamin A supplementation in pregnant women. Additional reviews were used as appropriate to establish the guidelines of interest. Specifically, the following questions were posed and carefully considered.

- 1) Should vitamin A supplements be given to pregnant/postpartum women?
- 2) If so, at what dose, frequency, and duration/time should they be given?

Recommendations

After reviewing the available relevant data, the following recommendations and commentary were put forth.

- **Pregnant women:** Vitamin A supplementation is not recommended during pregnancy as part of routine antenatal care for the prevention of maternal and infant morbidity and mortality. However, in areas where there is a severe public health problem related to vitamin A deficiency, vitamin A supplementation is recommended for the prevention of night blindness. Specifically, pregnant women should receive up to 10,000 IU vitamin A daily or up to 25,000 IU vitamin A weekly as an oral liquid, oil-based preparation of retinyl palmitate or retinyl acetate. Supplementation should be continued for a minimum of 12 wk during pregnancy until delivery. It is noteworthy that the WHO identified at-risk populations as those where the prevalence of night blindness is $\geq 5\%$ in pregnant women or $\geq 5\%$ in children 24–59 mo of age.
- **Postpartum women:** Vitamin A supplementation in postpartum women is not recommended for the prevention of maternal and infant morbidity and mortality.

Additional remarks

These guidelines are meant to replace and update the previous WHO recommendations concerning vitamin A supplementation in mothers for the prevention of vitamin A deficiency and for improving the vitamin A status of mothers and their infants. Although supplementation may be warranted in a subset of the population, both pregnant and postpartum women should be encouraged to receive adequate nutrition, which is best achieved through consumption of a balanced healthy diet, and to refer to guidelines on healthy eating during these phases of the life span. It is noted that recommendations for the treatment of xerophthalmia are not covered in this guideline and

that existing guidelines for the treatment of xerophthalmia in women of reproductive age should be referred to in these cases. Furthermore, a single dose of a vitamin A supplement $>25,000$ IU is never advised, particularly between days 15 and 60 post-conception when teratogenic effects may occur. Finally, the WHO concludes that there is no demonstrated benefit from taking vitamin A supplements in populations in which habitual vitamin A intake exceeds at least 3 times the recommended intake (~ 8000 IU or $2400 \mu\text{g RE}$), and the potential risk of

adverse events increases with higher intake ($>10,000$ IU) if supplements are routinely taken.

For more information

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