

## Vitamin D and female fertility

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**Introduction:** Vitamin D has an important modulatory role in human reproductive processes. Evidence has shown that vitamin D is associated with primary dysmenorrhea, uterine leiomyoma, and ovarian reserve in women.

**Methods:** We performed an internet survey to clarify the role of vitamin D on female fertility based on review articles.

**Results:** Vitamin D deficiency as defined by serum concentrations of 25-hydroxy vitamin D (25OHD) <20 ng/ml is associated with more severe symptoms of polycystic ovary syndrome (PCOS) through insulin resistance, ovulatory and menstrual impairments, hyperandrogenism, hirsutism, and obesity. All of these risk factors could lead to lower pregnancy success and infertility. Based on animal studies, vitamin D supplementation is related to a decreased risk of incident endometriosis.

**Discussion:** Sufficient vitamin D levels could have protective effects in endometriosis by improving metabolic parameters including insulin resistance and hyperlipidemia in context of PCOS.

**Keywords:** Vitamin D, Infertility, PCOS

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