The vitamin D receptor (VDR) and vitamin D metabolizing enzymes are found in reproductive tissues of women and men. Vitamin D plays a role in fertility on multiple levels, it has impact on in vitro fertilization (IVF) outcomes, endometriosis, polycystic ovary syndrome (PCOS), as well as it can boost levels of progesterone and estrogen, which decide the regulation of menstrual cycles and can increase the likelihood of successful conception. The most critical role of vitamin D in pregnancy may be within the uterus at the uterine lining. Improved fertility rate among women with sufficient levels of the hormone could be due to the vitamin D boosting production of good-quality eggs in the ovaries and improving the chances of embryos implanting successfully in the uterus. Vitamin D supplementation has its overall health benefits, which include bone health, pregnancy health, cancer and chronic disease risk reduction. Researchers recently found that low vitamin D levels may reduce pregnancy chances in women undergoing in vitro fertilization. Many studies have implicated oxidative stress in the pathogenesis of infertility causing diseases of the female reproductive tract. Studies have shown antioxidant supplementation to improve insulin sensitivity and restore redox balance in patients with PCOS. We will review through the lecture, the recent literature showing the advantage of antioxidants & vitamins in male and female fertility.

Vitamin D, an anti-oxidant nutrition: A new look in infertility

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