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Editorial

Role of Vitamin D in Women's Health

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Vitamin D, the sunshine hormone, is very essential for women's health. It is a fat-soluble vitamin that is synthesized endogenously when UV rays from the sunlight fall on the skin. The main role of vitamin D is to enable the absorption of calcium in the gut to maintain normal blood calcium and phosphate levels to promote normal growth and mineralization of bone. It is a well-known fact that vitamin D prevents rickets in children, osteomalacia in adults and protects older individuals from osteoporosis. However, recent studies have shown that besides having a skeletal role, vitamin D also plays an important role in maintaining a healthy cardiovascular system, active immune system and cancer prevention [1,2].

The common symptoms of vitamin D deficiency are generalized weakness, weight gain, poor concentration, headaches and restless sleep. Vitamin D deficiency in women is often associated with PCOS characterized by obesity, ovarian dysfunction, increased insulin resistance and compensatory hyperinsulinemia. Further, it is necessary to create awareness in pregnant females about the importance of vitamin D. Various studies have shown that low levels of vitamin D in pregnant females are associated with more chances of getting gestational diabetes, high blood pressure, premature birth and higher rate of pre-eclampsia. Also, low vitamin D levels during pregnancy have been shown to be associated with increased risk of infections, cesarean section and offspring with low birth weight.

Interestingly, adequate vitamin D levels during pregnancy have been shown to increase the muscular strength of children and prevent osteoporosis and cardiovascular diseases later on in their life. Vitamin D has also been shown to regulate some genes important for fetal development and it was observed that the children of vitamin D deficient mothers suffer more frequently from diseases such as type 1 diabetes mellitus, insulin resistance, schizophrenia, multiple sclerosis, asthma and wheezing [1].

Due to the pleiotropic roles of vitamin D, it is essential to maintain normal levels of vitamin D by following simple practices. Unfortunately, the pure vegetarian diet (except mushroom) lacks vitamin D, so either one can start the intake of flesh of fish, fish liver oils, beef liver, egg yolks and cheese or by consuming vitamin D fortified food [3]. Increased use of sunscreen and sedentary lifestyle of staying indoors should be avoided. Recently, it was suggested that vitamin D might play an important role in combating COVID-19. Vitamin D can regulate cytokine profiles, inflammation and is shown to regulate the production of antimicrobial peptides suggesting that vitamin D might play an important role by modulating the immune defense system [4].

In conclusion, in the current pandemic scenario, it is essential to maintain adequate levels of vitamin D by following a healthy diet and lifestyle.

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