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## A comparison of two treatment regimens on vitamin D levels in healthy children with vitamin D deficiency

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**Background and aim of the study :** Vitamin D is a steroid hormone crucial for developing children's bones. This study investigated the effect of two types regimen of vitamin D on children with vitamin D deficiency.

**Method:** This research was an interventional method. Participants in the study were children 2-18 years old with vitamin D deficiency. Pediatric endocrinologists examine each child. BMI, height, and weight are recorded. In the first group, one vitamin D tablet (IU50000) is taken once every week for eight weeks and then monthly for five months. In the second group, a bolus dose of 300,000 units is given intramuscularly, and 25 (OH) D levels will be measured 3-9 months later. The results of the two groups will be compared based on statistical analysis.

**Results:** 103 children and adolescents aged 2 to 18 were studied, and Vitamin D levels were not related to weight. After treatment, mean vitamin D levels were not significantly different in the age groups of the oral diet and the injectable diet; the highest level of vitamin D is in the lower age group. Age was significantly associated with the mean difference in vitamin D levels before and after treatment. In both the oral and injection groups, the mean time interval between VitD levels before and after treatment was significant. The mean difference in vitamin D levels before and after treatment was not significantly related to height.

**Conclusion:** In this study, 8 Perl treatment regimens resulted in 50,000 units per week and then monthly (61.9%), while one 300,000-unit ampoule resulted in 40%. Therefore, the response to treatment is better than that of oral therapy. This is a better response than oral therapy. The study found a significant correlation between response to treatment and age, so the younger age group had the best results. There was no meaningful relationship between gender and response to treatment

### Biography

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