

Q. What is the daily recommended dose of vitamin D and Calcium supplementation to be given to children with seizure disorders on anti-convulsants, so as to prevent rickets?

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Ans. It is a common perception that hypocalcemia, alterations in bone mineral density and osteomalacia or rickets may be seen as a result of use of anticonvulsants specially due to phenytoin-induced alterations in vitamin D metabolism.

Cochrane Database of Systematic Reviews showed only 2 studies almost 30 years old in this respect(1). Both the studies which included one study with children found no significant change in serum calcium or alkaline phosphatase in the vitamin D treated groups compared to the placebo groups. However, vitamin D administration improved bone mineral content (BMC) among persons with epilepsy who were taking phenytoin, primidone and phenobarbitone. It is opined that method of assessment of BMC may not be sophisticated at that time and as such not much relevant today. Prescription trends/practice of AEDs has also changed over the years with decreasing use of phenytoin, primidone and phenobarbitone. Further long-term vitamin D supplementation may be

associated with hypervitaminosis D and caution is needed(2).

For the present, it may be prudent to ensure a normal daily intake 400 mg of Calcium. A daily exposure of 5 minute to sunlight should suffice for Vit D requirement(4) and if this cannot be ensured 200 IU of Vit D can be given daily(3,4).

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