

New research calls for vitamin D supplementation in critically ill pediatric burn patients

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Deficiency of vitamin D is a common problem for patients with severe burn injuries and can lead to further health compromise. However, there are no evidence-based guidelines for vitamin D replenishment in such patients.

A new clinical trial by researchers at Cincinnati's Shriners Hospital for Children compared the outcomes of vitamin D2 and D3 supplementation on pediatric burn patients. The results of that research was published today in the OnlineFirst version of the *Journal of Parenteral and Enteral Nutrition* (JPEN), the research journal of the American Society for Parenteral and Enteral Nutrition (A.S.P.E.N.).

Fifty patients with severe [burn injuries](#), ranging in age from infants to teenagers, were enrolled in the trial. All participants received the standard multivitamin supplementation. In addition, D2, D3 or placebo was administered daily during hospitalization using a randomized, double blinded study design. Differences in vitamin D status were compared over time and at four study intervals: baseline, midpoint of hospitalization, discharge and one year post burn.

The trial found no significant differences in serum

vitamin D levels between the groups. Overall levels of vitamin D improved over the course of hospitalization; however, more than 10 percent of patients still had low levels at discharge. Those levels worsened at the one-year follow up exam, with 75 percent of placebo patients, 56 percent of D2 patients, and 25 percent of D3 patients showing evidence of deficiency.

The high incidence of low levels one year later indicates that continued treatment with vitamin D3 beyond the post-[burn](#) acute phase is needed to address the deficiency problem and its associated health risks.

Provided by American Society for Parenteral and Enteral Nutrition

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